



# The 5th International Conference on Maternal and Infant Nutrition and Nurture: Relational, Bio- cultural and Spatial Perspectives

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# Maternal, Infant and Child Nutrition and Nurture: Relational, Bio-cultural and Spatial Perspectives

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## **Keynote speakers**

### **Professor Fiona Dykes: Reconfiguration of the UK UNICEF Baby Friendly Initiative reflecting the importance of relationships.**

*MAINN unit, School of Health, University of Central Lancashire (sponsored by University of Sunshine Coast).*

*Fiona Dykes is Professor of Maternal and Infant Health and leads the Maternal and Infant Nutrition and Nurture Unit (MAINN), School of Health, University of Central Lancashire. She is an Adjunct Professor at University of Western Sydney and holds Visiting Professorships at Högskolan, Dalarna, Sweden and Chinese University of Hong Kong. Fiona has a particular interest in the global, socio-cultural and political influences upon infant and young child feeding practices; her methodological expertise is in ethnography and other qualitative research methods. She is a member of the editorial board for Maternal and Child Nutrition, the Wiley-Blackwell published international journal (editorial office in MAINN) and a Fellow of the Higher Education Academy. Fiona has worked on WHO, UNICEF, European Union (EU Framework 6), Government (DH), NHS, National Institute for Health and Clinical Excellence (NICE), TruSTECH<sup>®</sup> Service Innovation (UK), National Institute for Health Research (NIHR HTA), Wellcome Trust, British Council and Australian Research Council (ARC) funded projects. Fiona is author of over sixty peer reviewed papers and editor of several books including her monograph, *Breastfeeding in Hospital: Mothers, Midwives and the Production Line* (Routledge) and *Infant and Young Child Feeding: Challenges to implementing a Global Strategy* (Wiley-Blackwell).*

In 2013 UNICEF UK Baby Friendly Initiative launched a reconfiguration of the UK version of the Global WHO/UNICEF Baby Friendly Initiative (BFI) (UNICEF UK 2013). This represented recognition of the importance of facilitating mothers in becoming attuned to their baby's behavioural cues and needs and building a close and loving relationship with their baby. In this presentation, Fiona Dykes highlights a programme of research conducted by the Maternal and Infant Nutrition and Nurture Unit (MAINN) at University of Central Lancashire, England, and the ways in which it has influenced a paradigm shift with emphasis on the centrality of relationships at an organisational, staff to parent and parent to infant level. This work commenced with a critique of the ways in which institutionalisation of maternal and child health influenced staff practices and women's experiences of breastfeeding in postnatal ward settings with the 'production line' ethos being central to the experiences of staff and mothers (Dykes 2005a,b, 2006). The critique extended to incorporate a neonatal intensive care perspective illuminated by the work of Flacking *et al* (2006, 2007) in which a similar emphasis on the production influenced both staff and breastfeeding mothers in some neonatal units. This body of work resulted in recommendations that we need to encourage a paradigm shift away from institutionalised, production-line approaches to a more relational perspective (Dykes and Flacking 2010). A programme of research led by Thomson *et al* (2012a,b) offered key insights into implementation of the UNICEF UK Baby Friendly Initiative and ways in which implementers could change the hearts and minds of the health care staff. Key aspects of their approach included seeing policy change as dynamic, engaging grass-root staff in decision making, endeavouring to understand the local culture, recognising complexity and ensuring that change is implemented in a creative, systemic and culturally sensitive way. Understanding the ways in which women develop a sense of coherence related to their infant feeding experience is central to relationally based implementation of the BFI. The insights from a recent meta-ethnographic study of health care staff perceptions of the WHO/UNICEF BFI by Schmied *et al* (in press) in collaboration with MAINN staff illustrate some of the global challenges in implementing a relational ethos within institutionalised settings. The reconfigured discourses and standards of UNICEF UK BFI are outlined and challenges ahead discussed.

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### **Associate Professor Renee Flacking: Closeness and separation in NICU.**

*School of Health and Social Studies, Hogskolan Dalarna, Dalarna University, Sweden.*

*Renée Flacking is an Associate Professor at the School of Education, Health and Social Studies, Dalarna University, Sweden. She is currently the Head of Department for Sports and Medicine. Renée has a background as a Paediatric Nurse, having worked in a Neonatal Care Unit for more than 10 years. In 2007, she received her PhD in Medical Science, Uppsala University: Breastfeeding and Becoming a Mother – Influences and Experiences of Mothers of Preterm Infants. In 2009-2010 she undertook her PostDoc with Professor Fiona Dykes as her supervisor in MAINN, UCLan, conducting an ethnographic study in neonatal units in Sweden and England focusing on infant feeding and relationality. In 2010, the research network Separation and Closeness Experiences in the Neonatal Environment (SCENE) was established with Renée Flacking as the coordinator. This network comprises interdisciplinary collaboration between researchers from Europe and Australia. Renée’s main research interest is in the area of breastfeeding and parenting in families with preterm infants focusing on emotional, relational and socio-cultural influences.*

Neonatal care with regard to feeding tends to be focused on the infants’ intake of breast milk due to the beneficial nutritional and immunological aspects. However, the relational aspects of feeding are often underrated or disregarded during the transition from tube feeding to breastfeeding/bottle feeding (1). Some research has focussed on the question of how to optimise the transitional process in terms of milk intake and initiation of breastfeeding but very few studies have been undertaken to explore the process from the perspective of mother-infant relationship. The aim of this study was to explore, in-depth, the impact of place and space on feeding and relationality in mothers of preterm infants in Neonatal Intensive Care Units (NICUs) in Sweden and England (2). An ethnographic approach (3) was utilised in two NICUs in Sweden and two comparable units in England, UK. Over an eleven month period, a total of 52 mothers, 19 fathers and 102 staff were observed and interviewed. A grounded theory approach was utilised to analyze data. Findings showed that the construction and design of space and place was strongly influential on the developing parent-infant relationship and for experiencing a sense of connectedness and a shared awareness with the baby during feeding, i.e. an attuned feeding. Furthermore, the way that NICUs are designed influences staff-mother interactions, which in turn influence the quality of the mother-infant relationship and feeding practices.

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### **Associate Professor Danielle Groleau: Fluctuating embodied experiences of breastfeeding: when social space, power, identity and services make a difference.**

*FRSQ Senior Research Fellow, Associate Professor, Division of Social & Transcultural Psychiatry, McGill University, Montreal, Canada.*

*Danielle Groleau is a medical anthropologist with a PhD in Public Health and post-doctoral training in Transcultural Psychiatry. She is an Associate Professor in the Division of Social and Transcultural Psychiatry at McGill University, and Senior Investigator at the Culture and Mental Health Research Unit of the Psychosocial Research Axis of the Lady Davis Institute. She is a Fond de Recherche en Santé du Québec (FRSQ) Chercheur-Boursier Senior in the area of health and society. Dr. Groleau's expertise is in psycho-cultural determinants of health behavior, mainly in vulnerable populations. She teaches two courses in qualitative methods at McGill and has developed new qualitative interview tools designed to address knowledge translation of research results to public health stakeholders, while fostering a participatory approach to guide policy makers. She is internationally recognized as an expert in these areas, and has received numerous invitations from universities in Asia, Latin America, and Europe, as well as national and international agencies (World Health Organization, Pan-American Health Organization, and the government of Québec), for consultation in research and policy.*

In front of the irrefutable evidence for the benefits of breastfeeding, duration rates remain low in many western countries despite the desire of numerous mothers to breastfeed their infant. In a context of intensive promotion of breastfeeding, the spontaneous desire to 'do the best' for their infant motivates many mothers of the western world to adopt breastfeeding. However many abandon prematurely due to problems of accessibility to support and/or due to limits imposed by their social and public environments. This presentation will construct breastfeeding promotion as an objective of embodied cultural change and discuss how the post-structuralist concepts of habitus, field, symbolic capital and social capital can help more fully understanding the complexities of maternal embodied and emotional experiences as well as their empowerment and disempowerment experiences in various social spaces such as family, public space and health settings. The reflection presented will build from research projects completed in the Province of Québec (Canada) and give examples with experiences of mothers of various clinical, social and cultural backgrounds including immigrant mothers, Canadian mothers living in poverty and mothers of various cultural origin that gave birth to low-birth-weight babies. We will also examined how mothers who used health services with a high level of implementation of the Baby-Friendly Initiative experienced breastfeeding services as a medicalization-demedicalization process that changed their social space, by enhancing their social capital, and helped them negotiate the embodied experience of breastfeeding as a change in *habitus*.

### **Professor Deborah Lupton: 'Motherhood, risk and responsibility: a sociological perspective.**

*Centenary Research Professor in the Faculty of Arts and Design, University of Canberra.*

*Deborah Lupton is Centenary Research Professor in the News & Media Research Centre, Faculty of Arts & Design, University of Canberra. She has published extensively on the sociocultural dimensions of medicine and public health, risk, embodiment, pregnancy and parenting cultures, food and eating, obesity politics and the emotions. Her current research focuses on the digitisation of the unborn and children, critical digital health studies, big data cultures and academic work in the digital era. Her latest books are *Medicine as Culture*, 3<sup>rd</sup> edition (2012), *Fat* (2013), *Risk*, 2<sup>nd</sup> edition (2013), *The Social Worlds of the Unborn* (2013), *The Unborn Human* (edited, 2013) and *Digital Sociology* (in press).*

In contemporary western societies pregnant women and mothers of young children are expected to be both highly aware of risks to their unborn or children and to actively take steps to avoid these risks. Often the needs and wants of the pregnant woman or mother are neglected in the intense focus that is directed on foetal or child wellbeing. They must negotiate being positioned as the subjects of monitoring and surveillance in both public and private domains in which their actions are constantly evaluated in terms of the effects that may have on their unborn or children and whether or not they are achieving the ideals of the 'good mother' and 'reproductive citizen'. In this

presentation I cast a critical sociological eye on these dimensions of pregnancy and motherhood. I will discuss such aspects as the increasing public image of the unborn, the meanings that are given to the unborn and to children and notions of mothers' roles as the primary nurturers and protectors of their children. These aspects will be placed in their broader social, cultural and political contexts, including the heightened awareness of risk and uncertainty in relation to pregnancy, childbirth and children's health and wellbeing and the increasing role played by digital media technologies in pregnancy and early motherhood. These all have implications for how pregnant women and mothers of young children undertake caring, nutritional and nourishing practices and how they are evaluated in doing so.

**Associate Professor Helen McLachlan: Supporting breastfeeding In Local Communities (SILC): findings from a cluster randomised controlled trial in Victoria, Australia.**

*School of Nursing and Midwifery, La Trobe University.*

*Helen McLachlan has a clinical and research background in midwifery. She is an Associate Professor in the Department of Midwifery and at the Judith Lumley Centre, La Trobe University. Her research interests include breastfeeding, models of maternity care including caseload midwifery and homebirth, postnatal care and midwifery education. She has conducted studies using a variety of research designs (e.g. randomised controlled trials, surveys, focus groups). Her major teaching area is postnatal care. Helen was a Chief Investigator on the NHMRC-funded randomised controlled trial of caseload midwifery (COSMOS) and is a Chief Investigator on the Supporting breastfeeding In Local Communities (SILC) trial.*

Despite recommendations from the World Health Organization, exclusive breastfeeding for six months is uncommon in Australia. Increased breastfeeding support early in the postpartum period may improve breastfeeding maintenance. The Supporting breastfeeding In Local Communities (SILC) trial evaluated two community-based interventions to increase breastfeeding duration in Local Government Areas (LGAs) in Victoria, Australia. A three-arm cluster randomised controlled trial design was used. LGAs with a lower than average rate of *any breastfeeding* at hospital discharge and more than 450 births per year that agreed to participate were randomly allocated to one of three trial arms: 1) standard care; 2) early postnatal home-based breastfeeding support visits to women at risk of breastfeeding cessation or 3) home-based breastfeeding support plus access to a community-based breastfeeding drop-in centre. Home visits were conducted by Maternal and Child Health Nurses who had received training to provide the intervention (SILC-MCHNs). Breastfeeding drop-in centres were staffed by SILC-MCHNs. The primary outcome was the proportion of infants receiving *any* breast milk at four months of age. Breastfeeding outcomes were obtained from routinely collected Maternal and Child Health Centre data, including a new question collecting infant feeding 'in the last 24 hours'. Information was also obtained directly from women via a postal survey when their infants were six months of age. Data analysis is underway and breastfeeding outcomes will be presented. This study will determine whether two community-based interventions increase breastfeeding duration in Victorian LGAs with low breastfeeding rates.

**Dr Shanti Raman: Listening to mother-infant dyads: Exploring the cultural narrative in pregnancy, childbirth and infancy.**

*Community Paediatrician for Child Protection: Department of Community Paediatrics, South Western Sydney Local Health District.*

*Dr Shanti Raman is a paediatrician, with sub-speciality training in epidemiology and public health. Her special interests include health of migrants and refugees, poverty, international maternal, newborn and child health, indigenous child health, child rights, violence against women and children,*

*and quality and safety in health. She is currently completing a PhD in international maternal and child health at the University of New South Wales.*

Waves of immigration from the latter half of the 20th century have changed the cultural and ethnic mix of major regions of the world. Dynamic multicultural societies now are a reality across many parts of the world. In Australia we have the added complexity of a highly disadvantaged Indigenous minority population, with many other non-western minorities who are culturally and linguistically very distinct. The perinatal period, i.e. pregnancy, childbirth and early infancy, being the largest contributor to disease burden in low and middle-income countries is a significant transition period where the biological and the social strongly intersect. My aims are to explore the territory of cultural influences in the perinatal period, focusing on mothers' voices using 'ethnographic' listening; from field research in the Asia Pacific, experience with indigenous, migrant and refugee families in Australia, and evidence from a synthesis of qualitative studies. Drawing on clinical experience, field research and key themes identified from a systematic review and synthesis of the qualitative research in low/middle income countries, I will highlight the similarities and differences in what mothers want and need through the perinatal continuum. This includes identification and acknowledgment of the health promoting and the potentially harmful cultural practices and beliefs colouring pregnancy, childbirth and infancy. I will tease out what cultural capital might mean for mothers and infants of our culturally and linguistically diverse populations in Australia in the critical perinatal period. For public health policymakers and practitioners, this will mean tailoring perinatal services as a response to truly "listening" to what mothers want and need for optimum health and wellbeing of mother-infant dyads.

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### **Associate Professor Sonia Semenic: Expanding the BFHI to neonatal units: Challenges and future directions.**

*Ingram School of Nursing, Faculty of Medicine, McGill University, Montreal, Canada.*

*Sonia Semenic is an Associate Professor at the Ingram School of Nursing, McGill University (Montreal, Canada) and a Nurse Scientist at the McGill University Health Center. She has a background as an IBCLC and clinical nurse specialist in maternal child health, holds a PhD in Nursing, and completed postdoctoral training in community health nursing. Dr. Semenic's research program focuses on enhancing knowledge translation in perinatal health by exploring contextual influences on the implementation and sustainability of evidence-based practices. Her particular areas of research interest include barriers and facilitators to implementing the Baby-Friendly Initiative in different health care contexts (including the NICU); women's perceptions of breastfeeding promotion and support; and sociocultural influences on evidence use in nursing.*

Although the WHO/UNICEF's Baby-Friendly Hospital Initiative (BFHI) was originally designed for regular maternity care services, the critical importance of "baby-friendly" practices such as exclusive breastfeeding and skin-to-skin care for families with ill or preterm infants hospitalized in the neonatal intensive care unit (NICU) is increasingly recognized. Since 2009, a "Nordic and Quebec Working Group" has led an international initiative to expand the BFHI to neonatal units by adapting the BFHI's original "Ten Steps to Successful Breastfeeding" to the unique needs and challenges of neonatal intensive care. As the BFHI requires a fundamental shift towards a family-centered care approach, the proposed *BFHI for Neonatal Units* has added "3 Guiding Principles" to enable NICU

staff to focus on the mothers' individual needs, provide family-centered care and ensure continuity of breastfeeding support. To date, the Working Group has drafted standards and criteria for each of the 3 Guiding Principles and Ten Steps for the *BFHI for Neonatal Units*, as well as tools for external assessment of neonatal units for Baby-Friendly designation. Pilot testing of the *BFHI for Neonatal Units'* standards, criteria and assessment tools in a variety of industrialized and developing countries has underscored the diversity of neonatal care contexts and the potential challenges of a global initiative to integrate baby-friendly practices and principles into NICUs. This presentation will describe the development of and "next steps" for the *BFHI for Neonatal Units*; review the "3 Guiding Principles" and "Ten Steps" adapted for neonatal intensive care; and discuss potential barriers and facilitators to the adoption of the *BFHI for Neonatal Units* in different cultural contexts.

### **Dr Gill Thomson: Peer support: Politics and Possibilities.**

*MAINN unit, School of Health, University of Central Lancashire (sponsored by University of Sunshine Coast).*

*Gill Thomson is a Social Scientist with a psychology academic background who is currently working as a Senior Research Fellow within the Maternal and Infant Nutrition and Nurture Unit (MAINN) in the University of Central Lancashire.*

**Background and Aims:** Financial (positive or negative) and non-financial tangible incentives or rewards, such as free or reduced cost items or services that have a monetary or an exchange value, have been widely used to influence public health behaviours. Whilst the unintended consequences of incentive provision are alluded to in the literature, to date there has been little detailed exposition of what these consequences may be. We aimed to investigate the positive and negative unintended consequences of incentive provision for smoking cessation in pregnancy and breastfeeding. **Design:** A mixed methods study to inform trial design. Benefits of incentives for breastfeeding and smoking cessation in pregnancy (BIBS): <http://www.nets.nihr.ac.uk/projects/hta/103102>. **Setting:** North-West England and Scotland. **Participants:** A diverse sample with and without direct experience of incentive interventions. Qualitative semi-structured interviews and/or focus groups were held with 88 pregnant women/recent mothers/partners; 53 service providers; 24 experts/decision makers and interactive discussions with 63 conference attendees. Maternity and early years health professionals (n=497) participated in a web-based survey with open questions on positive and negative consequences. Two service user mother and baby groups from disadvantaged areas were involved as study co-applicants. **Results:** Positive and negative consequences were identified which highlight political, cultural, social and psychological implications of incentive delivery at population and individual levels. Four key themes are reported which relate to how incentives can 'address or create inequalities'; 'enhance or diminish individual autonomy, responsibility and motivation'; how they have a positive or negative on 'relationships with others' within their personal networks/health providers and 'impact on health/health services resources' in that whilst incentives may raise awareness and direct service delivery, this may be at detriment to other areas of health care. **Conclusion:** The utility and acceptability of incentive provision is a controversial area which generated emotive and oppositional responses. Evaluation of incentive interventions to maximise the potential for positive unintended consequences and mitigate negative unintended consequences needs to be integral to the planning, design and delivery of incentive programmes.

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**Lola Callaghan, Jennifer Winters and Leona McGrath: Working together to improve Aboriginal maternal and child health in NSW and Australia.**

*Malabar Community Midwifery Link & Aboriginal Nursing and Midwifery Strategy.*

*Lola Callaghan*

*Aboriginal Health Education Officer, Malabar Community Midwifery Link Service*

*Jennifer Winters*

*Child & Family Health Nurse, Malabar Community Midwifery Link Service*

*Leona McGrath*

*A/Manager – Aboriginal Nursing and Midwifery Strategy*

**Louise Duursma, Nicole Bridges & Karleen Gribble: Half a century of breastfeeding peer support.**

*The Australian Breastfeeding Association.*

*Louise Duursma qualified as a registered nurse in 1986 and has worked in a variety of health settings and roles including management. For the past 18 years Louise has been an Australian Breastfeeding Association Counsellor and has been group leader, regional rep, assistant branch president, local and folio assessor and is the immediate past Branch President for NSW. In 2003 Louise became an IBCLC which she recertified in 2013. Louise supports mothers in the community through her role as an ABA Counsellor and a lactation consultant and she teaches lactation workshops for health professionals Louise was the ABA representative on the NSW Health Breastfeeding Steering committee and the working party that wrote and reviewed the NSW Health Breastfeeding Policy. Louise is the past Chair of the NSW BFHI committee, and has been the ABA representative on the National BFHI committee.*

*Nicole Bridges is a full-time lecturer in public relations and advertising and is also a part time PhD candidate at the University of Western Sydney, researching online social networking and breastfeeding support. She has over 20 years experience in the retail marketing and public relations field.*

*Dr Karleen D Gribble is an Adjunct Fellow in the School of Nursing and Midwifery at the University of Western Sydney. Her research interests include adoptive breastfeeding, long-term breastfeeding, non-nutritional aspects of breastfeeding, child protection and breastfeeding, peer-to-peer milk sharing.*

In 1964 breastfeeding rates in Australia were at their lowest point in documented history - how did it get this way? What caused the turnaround to over 90% of women establishing breastfeeding? How do we meet the challenges of the 21st Century, to improve the continuation rates of breastfeeding in Australia? Established in 1964 as the Nursing Mothers Association and later to become the Australian Breastfeeding Association, this network of volunteers has provided 50 years of peer support and is the very essence of the Baby Friendly Hospital Initiative 10th Step. This paper will explore why this organisation was established, and what services and programs are offered. How is a volunteer trained? What is the evidence for peer support and how do we define peer support? It will also explore the challenges for a volunteer peer support organisation in the 21st century, particularly in relation to engaging a new cohort of mothers whose communication methods and friendship networks have been revolutionised by a culture defined and driven by social media.

## **Workshop facilitators**

### **Carol Bartle: Supporting breastfeeding in the NICU.**

*Canterbury Breastfeeding Advocacy Service Coordinator in Christchurch New Zealand and the New Zealand College of Midwives.*

Neonatal Intensive Care Units care for the most vulnerable of infants and the experiences of parenting in this environment can create equally vulnerable parents. [1,2] Mothers experience a wide range of parenting and infant feeding events in the NICU, some positive and some not so positive. [3,4,5] There are differences in practice related to breastfeeding and mother-infant contact between different NICU sites, despite evidence about the positive effects of kangaroo care, increasing parent-infant contact, improvements in parent accommodation, initiating and establishing a robust milk supply and the importance of an early start to well supported breastfeeding experiences. [6,7,8,9,10,11] This workshop will explore what optimal support services for NICU parents and mother support for breastfeeding, could look like, [12] and examine what the barriers are to mothers meeting their breastfeeding goals. The implications of NICU design and parent-infant proximity will also be explored. Narratives from women with babies in NICU will be used to both highlight and discuss key moments in NICU journeys, where breastfeeding may flourish or falter, and to feature the impact of space and design in NICU settings. A NICU mother summed up the paradoxical state of NICU breastfeeding discourse in Gill (2001); “everyone says that breastfeeding is important, so I think they should act like it’s important.” [13]

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### **Kajsa Brimdyr & Anna Blair: Shifting perspectives on birth and breastfeeding: Media analysis and representation.**

*Healthy Children's Project Inc. MA, USA.*

The US is struggling with the negative effects of over dramatic examples of birth in the media, TV and movies. We acknowledge the advantages of the placebo effect, but what are the nocebo effects of the negative portrayal of birth and breastfeeding in popular culture? This presentation will highlight a new show that strives to overcome this nocebo effect by presenting natural childbirth in a normalized fashion. Happy Birth Day rediscovers the completely natural, normal, and transformative experience of labor, birth and the first hour after birth. Happy Birth Day takes the viewer on an intimate journey with mother, father and child through this magical experience, giving the audience a peak at this time. This special journey, though inherent for every newborn, is uniquely different for each and every family.

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## **Kajsa Brimdyr & Karin Cadwell: Approaches to implementing skin to skin in diverse settings.**

*Healthy Children's Project Inc. MA, USA.*

This workshop will provide participants with an opportunity to explore challenges and possibilities when implementing skin to skin in the first hour after birth in diverse settings: high and low resource, tertiary and low risk. What happens when there are 800 births a day? If there are 4 births a month? What happens when the OR and Postpartum are on different floors? What happens if there are multiples? What if the OR is too cold? If the baby has a cleft? What should you teach in a prenatal class about skin to skin? What if the first time you see the mother is when she appears at L&D? The practical aspects of this keystone step of the revised Baby-Friendly Hospital Initiative will be examined related to both vaginal and cesarean surgery births. Also included in the workshop are the 9 instinctive stages (described by Widström and colleagues) that newborns go through during the first hour after birth. We have found that observing and documenting the progress of newly born babies as they progress through the 9 stages provides an opportunity for assessment of the newborn as well as a non-invasive quality improvement tool for a facility to measure birth practices and outcomes.

Dr Kajsa Brimdyr: is an experienced ethnographer who has worked with health care, municipal and technological businesses, using ethnography to understand and appreciate the work practice of professions, work-flows and services in order to help improve practice. She has conducted research in the United States, Sweden, Latvia, Egypt and Iceland. Her current research involves using video ethnography and interaction analysis to change practice in hospital settings to improve continuous skin-to-skin for the first hour after cesarean and vaginal births in Egypt and the United States. She, along with Ann-Marie Widstrom and Kristin Svensson, are the producers of the DVD *Skin to Skin in the First Hour after Birth: Practical Advice for Staff after Vaginal and Cesarean Birth*. Her newest DVD, the award winning *The Magical Hour: Holding Your Baby for the First Hour After Birth* is aimed at parents. Dr. Brimdyr is an advisor and faculty member for the BS in Maternal Child Health: Lactation Consulting at Union Institute and University.

Dr Karin Cadwell: is a nationally and internationally recognized speaker, researcher and educator. She is a member of the faculty of Healthy Children Project, Inc and convened Baby-Friendly USA, the organization implementing the UNICEF Baby-Friendly Hospital Initiative in the United States where she served as member of the board and assessor. Dr. Cadwell counsels breastfeeding mothers at the Center for Breastfeeding, a community-based lactation clinic on Cape Cod. She is a delegate to the U.S. National Breastfeeding Committee and a member of the faculty of Union Institute and Universities Bachelor's, Master's and PhD degrees in maternal child health-lactation consulting. She was Visiting Professor and chair of the Health Communications Master's Program at Emerson College (a joint program with Tufts University School of Medicine and Public Health.) She is the author of numerous books and articles. Dr. Cadwell is a Fellow of the American Academy of Nursing and was awarded the designation IBCLC in 1985 for "significant contribution to the field" and has also certified by exam.

## **Karleen Gribble, Carol Bartle & Ruth Newby: Supporting infant feeding in emergencies.**

### **Dr Karleen Gribble:**

School of Nursing and Midwifery, University of Western Sydney

It is widely understood that infants are vulnerable in emergencies and require prompt assistance. There is an appreciation that while an adult can survive on just water for many days, babies have an urgent requirement for their specific food needs to be met. Unfortunately, the provision of appropriate aid to infants has proven challenging to governments and aid organisations, including in developed countries. This workshop will discuss the issues impacting the delivery of appropriate aid to babies in emergencies and present case studies from two recent emergencies in Australia and New Zealand. Workshop participants will be encouraged to share their experiences with emergency preparedness and response and to identify how they might assist in the protection of infants in emergencies.

### **Case Studies: 2010-11 Queensland floods**

#### **Ruth Newby:**

*The University of Queensland, Herston, Australia.*

*During natural disaster, formula feeding is associated with young child morbidity, even in a resource rich country.*

A retrospective cross-sectional online survey assessed the infant and young child feeding and health challenges that families faced in affected areas of Queensland during the 2010/11 weather emergencies. Infants and young children receiving any formula at the time of the emergency had odds 9.5 times higher for visiting medical practitioners following the event than infants not receiving any formula (95%CI 3.3-27.3,  $p < 0.001$ ) after adjustment for potentially confounding variables. Both exclusive breastfeeding (OR 0.1; 95%CI 0.0-0.5,  $p = 0.002$ ) and any breastfeeding (OR 0.3; 95%CI 0.1-0.9,  $p = 0.036$ ) were also found to be protective against visits to medical practitioners. Several infants were cross-nursed. Forty-five percent of formula feeding mothers would consider allowing another mother to breastfeed their baby in an emergency and 75% of breastfeeding mothers would consider feeding another's child. Seven percent of infants were introduced to formula because of the emergency. Women reported that breastfeeding comforted them (74%) and their infants (72%), and 25% of mothers increased breastfeeding to enhance milk supply. Few women obtained specialist advice regarding breastfeeding.

Practical feeding support for families and timely targeted advice from appropriately trained health professionals during emergencies may enhance infant and young child wellbeing and reduce morbidity even in a resource-rich context.

### **2010-2011 Christchurch Earthquakes**

#### **Carol Bartle:**

*Canterbury Breastfeeding Advocacy Service Coordinator in Christchurch New Zealand and the New Zealand College of Midwives*

*A climate of crisis: Earthquakes, rubble, contaminated water, milk wars and infant feeding* Attention to infant feeding issues was lacking in the planning and response to the 2010-11 Christchurch, New Zealand earthquakes. The population of Christchurch was faced with a situation where there was a lack of clean water and a fragile or non-existent power supply. As a result infants who were not breastfed faced serious health risks. Volunteers at welfare centres were not given guidance about infant feeding and this resulted in breastfeeding mothers being given donated tins of breast-milk substitutes. These donations were uncontrolled, unable to be monitored, products ended up being stockpiled by various agencies and distribution continued long after the emergency was over. Anecdotal reports from breastfeeding women during the Christchurch earthquakes suggested that the absence of easily accessible, accurate information about infant feeding during disasters and emergencies was both damaging to breastfeeding as well as dangerous for babies being fed on breast-milk substitutes.

In New Zealand, the environment within which individual and government infant feeding decisions are made is impacted not just by the probability of continuing emergencies but by the position of New Zealand as a major producer of milk for the infant formula industry. Galtry (2013) pointed out the narrow economic measure of well-being that the NZ dairy industry is based on and questioned whether the industry is undermining global best practice infant feeding. There are obvious linkages to be made here between marketing, infant health and growing risks of not breastfeeding.

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## Speakers

### **Al bandri Abdulrahman Abunayan: Experiences and challenges of infant and young child feeding in Saudi Arabia.**

*Ministry of Health, Kingdom of Saudi Arabia.*

Saudi Arabia is committed to the Global Compact to protect and promote and encourage breastfeeding and child through the adoption of child-friendly Hospital Initiative and the system of child rights and the rights of working women. Saudi Arabia signed the International Code for the trading of breast milk substitutes and put the law of a royal decree in 2004. Committed to what came in the code, we have a national committee of the ministries and relevant bodies to follow up the implementation of the law and regulations in the Education and Higher Education and Health and the Food and Drug Administration and Islamic affairs and social media. There has also been the formation of a committee to look into the violations of the law and make decisions on violators from Minister of Health. Saudi Arabia is the second in the implementation of the initiative of global trends for feeding infants and young children. We have 52 health institution baby-friendly (hospital and primary health care centers), in different regions. According to the results of nutritional surveillance, Saudi mothers begin breastfeeding after birth but more than 60% of mothers begin feeding their babies in the first month because some of them back to work after 8 weeks of birth and others use pills to prevent pregnancy. Challenges to breastfeeding in Saudi Arabia accompanies breastmilk substitutes. Advertising is forbidden for any milk for the lifetime of less than a year old and will reach the age of 3 years. In this paper I will talk about the steps taken by breastfeeding program in Saudi Arabia to support breastfeeding and to meet the challenges in line with the recommendations and global strategies, which by the World Health Organization.

### **Parvin Abedi: The effect of an intervention program on breastfeeding self-efficacy and duration of exclusive breastfeeding.**

*Parvin Abedi, Somayeh Ansari & Soheila Bani. Department, Nursing and Midwifery School, Ahvaz Jundishapur University of Medical Sciences, Iran and Department, Nursing and Midwifery School, Tabriz University of Medical Sciences, Iran.*

**Introduction:** Breast-feeding is one of the most important ways to improve children's health. One of the effective factors in continuation of breastfeeding is self-efficacy. Breast-feeding self-efficacy is a valuable framework that anticipates breastfeeding manner and shows maternal self-confidence and her ability in breastfeeding. Since high level of self-efficacy can be effective to increase exclusive breast-feeding duration, this research has been designed in order to determine the effect of interventional program on breast-feeding self-efficacy and duration of exclusive breast-feeding in pregnant women in Ahvaz. **Method:** This research was an experimental study in which 130 nulliparus women who tended to breastfeed and has been visited in the health center of Ahvaz, Iran for prenatal care and their gestational age was above 36 weeks were selected. When primary self-efficacy scores of samples were found, they were randomly divided into two groups and interventional program was performed for interventional group. Then one month after delivery, self-efficacy scores were determined by Fax & Dennis questionnaires and six month after child birth, duration of exclusive breastfeeding was determined by Condition of Breastfeeding Questionnaire. Data were analyzed by means of descriptive and inferential statistics in SPSS v.17. **Results:** The findings of this study showed that, after carrying out the intervention, the scores of breastfeeding self-efficacy in experimental group was higher than control group. Also, there was a significant relationship (correlation) between breastfeeding self-efficacy and duration of exclusive breastfeeding. Thus, mothers with high level of self-efficacy had high rate of exclusive breastfeeding and longer breastfeeding duration than mothers with low level of self-efficacy. **Conclusion:** By educating mothers, breastfeeding self-efficacy and exclusive breastfeeding can be increased. In this way mothers can solve their problems easier than before with higher self-confidence and by leaning

on their beliefs. As a result, they can remove difficulties in continuation of breastfeeding and also they can promote their own and child's health.

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## **Madelynne Arden: Baby-led weaning: A thematic analysis of reported beliefs and experiences.**

*Madelynne A. Arden & Rachel L. Abbott. Department of Psychology, Sociology & Politics Sheffield Hallam University.*

**Background:** Baby-led weaning (BLW; Rapley, 2013) is an approach to introducing solid foods to infants which gives control of the feeding process to the infant. It relies on an infant being developmentally able to feed themselves as opposed to traditional weaning that relies on a more parent-led spoon feeding approach. BLW is reportedly becoming a more common method of weaning in the UK and New Zealand. Few studies to date have qualitatively investigated the experiences of mothers who use BLW and have derived their themes from the interview questions (Brown & Lee, 2011; Cameron et al. 2012). There is therefore a need for an in-depth analysis of reported experiences of BLW in order to inform practice. **Aim:** This study aimed to investigate the reported experiences and feelings of mothers using a BLW approach in order to better understand the experiences of the mother and infant, the benefits and challenges of the approach, and the beliefs which underpin these experiences. **Method:** 15 UK Mothers were interviewed over the course of a series of five emails using a semi-structured approach. The email transcripts were anonymised and analysed using thematic analysis (Braun & Clarke 2006). **Results:** There were four main themes which were identified from the analysis: i) Trusting the child, ii) Parental control and responsibility, iii) Precious milk and, iv) Renegotiating baby-led weaning. The themes identified reflect a range of different ideals and pressures that this group of mothers tried to negotiate in order to provide their infants with a positive and healthy introduction to solid foods. One of the key issues of potential concern is the timing at which some of the children ingested complementary foods. Although complementary foods were made available to the infants at 6 months of age, in many cases they were not ingested until much later, and this seemed to be consistent with a commonly held belief that 'food until one is just for fun'. **Conclusion:** The decision to follow BLW in this group of mothers arose from two main factors: as part of a parenting philosophy, or when initial attempts to follow TW had failed. For this latter group, there may have been other underlying reasons for the child's lack of interest in food, or unwillingness to be spoon-fed that may impact on their experience of BLW. This is the first study to identify these two different BLW groups Implications for Policy, Practice and Education: The extent and nutritional effects of, delays to the ingestion of solid foods for infants following a BLW approach should be further investigated. Health professionals should develop suitable guidance to support parents who choose a BLW approach and these should include guidance about delay.

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## **Marjorie Atchan: Operationalising a global strategy in a national setting: the implementation of the Baby Friendly Health Initiative in Australia.**

*Marjorie Atchan, Deborah Davis & Maralyn Foureur. University of Technology, Sydney, NSW, Australia; and University of Canberra, Canberra, ACT, Australia.*

**Aim:** To explore how a global health promotion strategy, the Baby Friendly Hospital Initiative, was initially operationalized in the Australian national setting. **Background:** The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) launched the Baby Friendly Hospital Initiative (BFHI) globally in 1991 as a desirable health promotion strategy. A positive association clearly exists between BFHI implementation and breastfeeding initiation and duration [1]. This effect is more marked where a wide range of stakeholders provides support. On the positive side BFHI implementation in Australia has 'in principle' support at a national and governmental level, inclusion in health policy in several states. Nationally [2], currently 74 maternity facilities (19%) are 'baby friendly', there is ongoing interest in the process of acquiring accreditation and significant numbers have achieved multiple reaccreditations. On the negative side, across states and territories there is significant variation in numbers of accredited facilities and presumably levels of implementation, which must impact on the consistency of breastfeeding support provided. A recent national infant feeding survey [3] demonstrated that while 96% of women interviewed initiated breastfeeding, duration rates were mediocre at best. Australian studies [4] reveal the existence of multi-level barriers to the BFHI. These barriers include a lack of knowledge, understanding and only a modest regard for the Initiative's aims. **Methods:** A case study research approach was used to examine the influencing factors on the initial implementation of the BFHI in Australia. Case study research requires a range of data to be collected to illustrate the case and increase confidence in the findings. Data collected consisted of a review of archival data including published minutes, journal articles and newsletters, plus interviews with strategic stakeholders who provided an oral history with particular reference to key time points. **Results/Findings:** Each stakeholder interviewed presented a unique perspective of the events of the early development of the Initiative internationally and in Australia. Archival data provided valuable supportive evidence and detail unobtainable elsewhere. The initial implementation process of the BFHI in Australia encountered a number of obstacles. UNICEF Australia's brief included handing over the Initiative to an appropriate champion within a globally predetermined timeframe. The Australian Federal government did not take up the offer however. Some stakeholders believe the process surrounding the subsequent search for other opportunities was neither comprehensive nor robust. The Australian College of Midwives (ACM) assumed governance of the Initiative in 1994. Funding that was presumed to be attached to the transfer did not eventuate. The ACM discovered that governance of the BFHI would prove to be far more challenging than originally anticipated. **Conclusion:** Implementing a global Initiative in a national setting presented many anticipated and also a number of unforeseen challenges. In Australia the effects of the initial implementation process have been far reaching. Many women have benefited from the additional support they have received. In some states though the BFHI has struggled to gain momentum. The level of commitment to and understanding of the Initiative by policy makers, health professionals, health administrators and clinicians varies widely.

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## **Nicole Bridges: Is Facebook the new forum?**

*School of Humanities & Communication Arts, University of Western Sydney.*

**Background:** The Australian Breastfeeding Association (ABA) is Australia's largest breastfeeding information and support service. Breastfeeding is a practical, learned skill and ABA help more than 80,000 mothers each year. Founded in 1964 by six Melbourne mothers as the Nursing Mothers'

Association, the ABA aims to help and support other mothers to breastfeed using a mother-to-mother approach. As pointed out by Chapman and Lupton (1994), peer support may represent a cost-effective, individually tailored approach and culturally competent way to promote and support breastfeeding for women of varying socioeconomic backgrounds, especially where professional breastfeeding support is not widely available. Peer support for breastfeeding mothers has been proven to be especially important in communities where breastfeeding role models are lacking (Pryor, 1991). A relationship with a peer counsellor has been identified as one of several factors contributing to a successful breastfeeding relationship (Naber & Locklin, 1994). ABA services include membership for both mothers and health professionals, a 24-hour Breastfeeding Helpline, an informative website, local support groups, antenatal classes, retail shops and numerous print and online resources, including social media such as Instagram, Twitter and Facebook. Facebook has been the most popular of the three social media platforms that the Association has engaged with and the national page has over 32,500 likes (<https://www.breastfeeding.asn.au/aboutaba>). More than 230 local Australian Breastfeeding Association (ABA) groups operate throughout Australia. Parents can physically come along and meet new friends, chat to and get hints and tips from other parents who've 'been there' and talk to a trained, volunteer breastfeeding counsellor if needed (<https://www.breastfeeding.asn.au/contacts/groups>). However, many local groups are now also engaging with social media and have their own local group Facebook pages that enable mothers who are remote or otherwise not able to or interested in gaining support face-to-face to still find accurate breastfeeding information and support in their local area. Facebook has also enhanced the communities formed locally for those parents who do meet face-to-face in combination with social media. **Aim:** This small group discussion will present findings for the research conducted for a doctoral thesis, with the intention of providing an understanding of how breastfeeding mothers find (and provide) support online. **Method:** Employing an ethnographic research approach, this study investigates how engaging with Facebook impacts on a mother's breastfeeding experience. This research comprises of three steps: 1). Observation of 17 closed Australian Breastfeeding Association Facebook groups over a period of 4 week in July/August 2013. 2).Online depth interviews (utilising Facebook "Chat" function) with admins of three of those 17 groups in late 2013, early 2014. 3). Online focus groups (utilising Facebook "Events" function) of groups of 6-8 active participants from each of these three groups. **Findings:** The analysis of the closed Facebook pages will reveal the nature of support that mothers are seeking and the types of information they enjoy sharing. Posts will be quantified and analysed using a standard coding framework, categorising them in several ways: 1).Post type. Whether they were support seeking (queries) or information sharing (shares) in nature. The support seeking posts were further broken down into: informational queries and a combination of informational and emotional queries. Information sharing posts broken down into the following sub-groups: information shares (such as links, media articles, photos, videos, memes, information or anecdotes) and a combination of informational and emotional shares. 2).Post length. 3).Post themes (breastfeeding, parenting or Australian Breastfeeding Association). In addition to support seeking and information sharing posts, the support giving posts (i.e. comments) will also be analysed and quantified, categorising them in the following ways: 1).Thread length. 2).Timeliness of responses. 3). Comment type; whether they were informational, emotional, or informational AND emotional in nature. **Implications for practice:** Social media is a powerful tool for organisations that can be used to promote, enhance and complement the services they already provide. By understanding the way women find and provide breastfeeding support in the online social media environment, organisations like the Australian Breastfeeding Association (and other support services in the health care sector) can better engage with, support and educate their client base.

### **Kajsa Brimdyr: Analysis of newborn tongue behaviour as related to intrapartum epidural fentanyl exposure.**

*Kajsa Brimdyr, Ann-Marie Widstrom, Karin Cadwell & Kristin Svensson. Healthy Children's Project Inc. MA, USA.*

The 2013 State of the World's Mothers revealed that more than a million babies world-wide die on the day they are born (Save the Children 2013). Research shows that holding babies skin to skin during the first hour after birth can decrease mortality in the newborn period by up to 22% (Edmond et al 2006). Babies who are placed skin to skin have more optimal blood glucose levels, better respirations, more optimal temperature regulation, and are more likely to leave the hospital exclusively breastfeeding (Bramson et al 2010, Moore et al 2012). A realistic overview of the phenomenal abilities of the baby during the first hour after birth provides concrete examples of the competence of a newborn when given the opportunity. The instinctive 9 stages that all babies go through in the first hour after birth, when placed skin to skin with their mother include the birth cry, relaxation, awakening, activity, crawling, rest, familiarization, suckling and sleeping (Widstrom et al 2010). Each stage has different distinct actions. A visual presentation of babies actions during the first hour after birth is available with practical advice (Brimdyr et al 2011). The relationship between epidural analgesia and poorer breastfeeding outcomes has not been clarified by research. Major design limitations include differences in the pharmacologic composition of the epidural infusion, amount of the drug administered, when it was administered and the duration of administration, and possible drug confounders, such as oxytocin substitutes and fluids. In addition, breastfeeding outcomes and epidural analgesia study results may not be generally applicable to other settings because of practices such as immediacy and duration of skin to skin, rooming-in and availability of trained and competent lactation support and education for the mothers. When the breastfeeding outcome is measured after discharge the confounders multiply to include the availability of breastfeeding protection and support and the mother's life situation including return to work. An underlying question is whether or not epidural analgesia affects the instinctive behaviors of the neonate especially locating the breast, sucking and swallowing. For example, Beilin et. al. (2005) have found that NACS (Neurological and Adaptive Capacity Scores) were significantly lower when the epidural administered to their mothers contained more than 150 micrograms of total epidural fentanyl than when the epidural contained only bupivacaine and indicated a correlation between high levels of fentanyl and decreased likelihood of breastfeeding (Beilin et al 2005). Using iterative analysis, videotapes of neonates tongues while skin to skin were examined including the length and amount of protrusion, frequency of tongue motions and type of tongue activity. We found that tongue behavior in the first hour after birth is markedly different in babies with low/no fentanyl exposure compared to those with more fentanyl exposure via their mothers' epidural analgesia (Brimdyr et al 2012). Preliminary analysis seems to indicate that tongue activity increased and achievement of the 9 stages was consistently quicker in low/no fentanyl babies compared with babies who had high doses of fentanyl. This initial investigation has led the way to a larger study, currently being conducted.

### **Amy Brown: Breastfeeding duration and early parenting behaviour: the role of an infant-led, responsive style.**

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Department of Psychology College of Human and Health Sciences, Swansea, UK.*

**Background:** Popular parenting literature promotes different approaches to caring for infants, based around variations in the use of routine and promoting independence. However, there is little empirical evidence of how these early behaviours affect wider parenting choices such as infant feeding. Breastfeeding often requires an infant-led approach, feeding on demand and allowing the infant to regulate intake whilst conversely formula feeding is open to greater caregiver manipulation. The infant-led style associated with breastfeeding may therefore be at odds with philosophies that encourage strict use of routine and independence. **Aim:** The aim of this study was to explore the association between early parenting behaviours and breastfeeding duration. **Methodology:** Five hundred and eight mothers with an infant aged 0 – 12 months completed a questionnaire examining attitudes and behaviours surrounding early parenting and breastfeeding duration. To explore early parenting style participants completed a copy of the Infancy Parenting Styles Questionnaire [IPSQ] which was developed to examine approaches to parenting during

infancy. This questionnaire was designed after focus groups, literature search and exploration of themes in baby manuals. Five factors emerged: use of routine, discipline, nurturance, involvement in development and anxiety for her infant. **Results:** Formula use at birth or a short breastfeeding duration were significantly associated with low levels of nurturance, high levels of reported anxiety and increased maternal use of routine. Conversely an infant-led approach characterised by responding to and following infant cues was associated with longer breastfeeding duration **Conclusions:** The findings raise pertinent questions in relation to the impact of parenting behaviour during early infancy upon breastfeeding initiation and duration. The main tenet that maternal desire for routine and infant independence and mothers' anxiety can impact negatively upon breastfeeding is an important consideration for those working to support pregnant and new mothers in the postnatal period. Moreover, given the popularity of specific approaches to early parenting in the popular literature, further research is needed to examine how these might be impacting upon infant health and development. Awareness needs to be raised about how promotion of strict wider parenting behaviours which promote infant independence may impede breastfeeding initiation and duration.

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## **Miranda Buck Women's experiences of becoming a breastfeeding mother.**

*Miranda Buck, Karalyn McDonald, Lisa Amir Judith Lumley Centre, La Trobe University.*

**Background:** Breastfeeding is important to new mothers, framed as intrinsic to 'good mothering' and many do not seriously consider other options for infant feeding before birth [1, 2]. The majority of breastfeeding women experience some initial breastfeeding difficulties that may include pain and nipple damage [3], acute breastfeeding problems, such as mastitis, which may result in significant pain, unpleasant physical symptoms and disruption of women's lives. However, it has also been noted that many women continue to breastfeed despite extraordinary difficulties [4]. The CASTLE Study [5] was a cohort study, over the first 8 weeks postpartum, of first-time mothers in Melbourne receiving public and private maternity care, gathering data about their breastfeeding practices and problems. This study explores, qualitatively, the experience of participating in the CASTLE Study and how breastfeeding difficulties intersect with the pressure to achieve the 'gold standard' of mothering. **Aim:** The aims of this study were to map the variations of the journey women take when establishing breastfeeding and to explore the experience of participating in breastfeeding research. This is a novel methodology using online forum-based discussions to capture collective understandings and variations in meaning that women attribute to their experiences of breastfeeding difficulties. **Methods:** A purposive sample of 24 women, who had previously participated in the CASTLE study, was recruited and enrolled in a private online discussion forum. The participants were divided into two groups, those who breastfed for less than a year and those who breastfed for more than a year, and parallel forums with identical format were run for three weeks. Participants were able to post on themed discussion forums, at any time, asynchronously, or to engage in group online conversations, which took place at prearranged times. Phenomenographic analysis was used to explore the narratives and describe the differences and similarities between the experiences of the women. **Results:** Central to the experience of becoming a breastfeeding mother were conceptions of unpreparedness, vulnerability, isolation and burden. In describing their physical transformation and the challenges of initiating breastfeeding, the women's stories map their pathways into motherhood. They outline architectures of motherhood, which are highly complex, only understandable from the other side and ultimately transitory. The experience of participation in the study was described as reassuring and supportive, not only of breastfeeding but of mental wellbeing, in a time of isolation and transformation. **Conclusion:** Women in this study felt unprepared for the challenges of breastfeeding. In an unstable and unfamiliar landscape they wanted something to ground them: a routine, some guidelines, instructions. Modern women are

rarely exposed to the embodied reality of early motherhood and the needs of babies until presented with their own child. Historically this is unprecedented. We know that emerging social media and digital technologies are being utilized by new mothers to support breastfeeding but there is little evidence of the efficacy or consequences of this evolving phenomenon. Whilst employing a breastfeeding researcher to visit new mothers at home is an effective strategy to both improve breastfeeding rates and support women, more cost effective strategies are needed.

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## **Elaine Burns: “She knew my story”: Breastfeeding support from a known midwife in the first 6 weeks after birth.**

*Dr Elaine Burns & Professor Virginia Schmied. School of Nursing and Midwifery, University of Western Sydney.*

**Background:** In Australia 9 out of 10 women initiate breastfeeding after birth. However during the first month, 3 of the 9 will have ceased breastfeeding or introduced supplemental formula [1]. Many women report that the early weeks of breastfeeding are particularly difficult, requiring emotional and practical support from others [3]. Midwives provide support during the early establishment of breastfeeding however women report widespread dissatisfaction with the fragmented and scant support they receive from health professionals in the early weeks following birth [3, 4]. Recent metasynthesis findings, by Schmied and colleagues, described breastfeeding support along a continuum from disconnected encounters to authentic presence. Authentic presence was described as a ‘trusting’ relationship which reflected genuine rapport between the woman and caregiver (3). Research has shown that the language and practices adopted by midwives who offer a more relationship focused style of care are more facilitative of breastfeeding support and indeed women indicate a preference for this kind of support [2, 3]. Yet little is written about the components of breastfeeding support provided by midwives in a continuity relationship with women. **Aim:** This study aimed to: 1). Explore the language and practices adopted by privately practicing midwives providing breastfeeding support, in a continuity of care relationship, during the first 6 weeks after birth. 2). Capture women’s experiences of receiving breastfeeding support from midwives in a continuity of care relationship during the first 6 weeks following birth. **Method:** Ethnographic techniques including observation and interviewing were used to observe and audio record interactions in women’s own homes during the first couple of weeks after birth. Data collected included 9 observed interactions and 7 interviews with breastfeeding women. All data were transcribed verbatim and coded using a discourse analysis. **Findings:** Women described breastfeeding support from their known midwife as enabling and normalising. The availability of ongoing support (for 6 weeks) from a midwife who “knew my story” and who had come to be viewed as a knowledgeable ‘friend’, resulted in a level of support which met the majority of women’s needs. Several women reported that even though they had not required 24 hour breastfeeding support, just knowing that it was available gave them confidence. In particular, breastfeeding women discussed the importance of having access to support during weeks 2 - 4 post birth. The language and practices adopted by this group of observed midwives reflected a focus on the woman and her developing relationship with her infant, a respect for the newness of the relationship with her infant and the importance of including her significant others. **Conclusion:** The language and practices adopted by these privately practicing midwives reflected a genuine ‘authentic presence’ during breastfeeding support. Women suggested that the relationship built up during pregnancy influenced their breastfeeding experience in positive ways. These findings provide

an example of an enabling style of breastfeeding communication which originated from relationship focussed midwifery care.

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## **Anna Byrom: Beyond a BFI Franchise: Leading, performing and receiving infant feeding care in a 'fast-food' maternity service.**

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**Background:** There is growing interest, throughout the United Kingdom (UK), in changing organisational culture as a lever for healthcare improvement<sup>1</sup>. Approach to change, within the National Health Service (NHS) has focused on the use of top-down, scientific-bureaucratic methods [2]. Such rationalist approaches to change have been associated with the production-line aspects of Fordism [3]. Research into the impact of the scientific-bureaucratic approach to managing change in practice settings is beginning to demonstrate the dissatisfaction and dissonance created by this approach [4]. The concept of large-scale approaches to change by implementing macro-interventions into health care systems has developed over the last couple of decades [5,6]. The UNICEF/WHO BFHI is an example of a large-scale intervention that is currently being adopted, by maternity services in the UK, to change and optimise health care practices related to infant feeding and care of the newborn. Research into the BFHI identifies the many quantitative benefits for maternity units achieving full accreditation including an increase in breastfeeding rates [7, 8, 9, 10]. There has been a recent move to understanding the barriers to implementing the BFHI policy [11] and also how BFHI training influences staff attitudes and behaviours [12, 13]. However, there is a lack of research that examines how the process of implementing and maintaining the BFHI standards may influence cultural shifts for units as a whole, individual staff and the families they care for. **Aims and objectives:** To explore how the macro (large-scale) health intervention known as the WHO/UNICEF Baby Friendly Hospital Initiative impacts upon the micro-culture of hospital's maternity units in the North-West of England. The particular objectives will be: a) to consider whether and in what ways the BFHI's scientific-bureaucratic approach impacts on the practices, culture, views and tacit assumptions of staff involved in this type of governance; and b) how this impacts on the views and experiences of parents using the service. **Theoretical perspective and Methodology:** The underpinning theoretical perspective stems from critical theory and informs a critical ethnographic approach. This is aimed at eliciting various levels of cultural knowledge both 'explicit' and 'tacit' with the latter constituting taken for granted and therefore hidden forms of knowledge [17,18]. **Methods:** In-depth critical ethnography has been utilised, as an approach that focuses upon exploring a specific aspect of activity within a given community [18], in this case implementation of the BFHI. This will involve periods of observation of activities in all areas of the maternity unit engaging with the BFHI. Particular reference will be made to interactions between ward staff, breastfeeding women and their partners. Participant observations will be made of day and night shifts over a period of ten weeks for each of the three sites<sup>18</sup>. The observations will be supplemented by in-depth interviews that relate to what has been observed, with staff and parents. Based on previous ethnographic research [11,12,13] it is anticipated that there will be around 20 interviews with parents who have chosen to breastfeed or formula feed and 20 interviews, with a range of staff (e.g. midwives, health care assistants, peer supporters, managers/strategic leads and neonatal staff) on each of the 3 sites. **Sites:** The research will be undertaken in two similar units at different stages of BFHI implementation. They will both be consultant-led, average sized maternity units that typify the predominant model of maternity care in England. This will enable useful comparisons to be made across similar institutional settings at different stages of BFHI status. Site 1 – (Mphil phase) will be a fully accredited BFHI unit that has sustained the award over several years. Site 2 – (PhD phase) will have a certificate of commitment (a certificate to show that the maternity

unit is actively engaging with the BFHI). Analysis of the data, from site 1, has been undertaken using Max-QDA qualitative analysis software and aims to be completed prior to February 2014. It has been cyclical involving the discovery of new questions during the field work, which, in turn, guided further data collection through a process of iterative, concurrent data collection and analysis [19]. The interview data has been taped and transcribed and observational data recorded. Basic, organising and global themes will be generated utilising thematic networks analysis<sup>20</sup>. To support a critical analysis, further readings of the transcripts have been conducted to identify issues related to ideology, power and control [21].

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## **Samantha Charlick: Exploring The Lived Experiences of First- Time Mothers, In Their Journey Towards Exclusive Breastfeeding In Australia.**

*Samantha Charlick, Adjunct Professor Jan Pincombe, Dr. Lois McKellar & Dr. Andrea Fielder. University of South Australia.*

**Aim:** To explore the lived experiences of first-time mothers, in their journey towards exclusively breastfeeding their baby between two and six months in Australia. **Background:** Given the significant benefits of breastfeeding for the infant, mother and community, the World Health Organisation (WHO) (2002) recommend exclusive breastfeeding for six months. Despite a large amount of government funding directed at public health campaigns to improve breastfeeding rates, Australia currently has one of the lowest exclusive breastfeeding rates in the Western world (14% at six months) (Australian Institute of Family Studies 2008). Even though most research focuses on the early postnatal period (birth-two months), the largest decline in exclusive breastfeeding rates are seen between two and six months. This study therefore aimed to investigate women's experiences of their journey towards exclusive breastfeeding in that two-six month timeframe. **Methods:** The research employed an Interpretative Phenomenological Analysis (IPA) (Smith 1996) design. IPA is a recently developed and rapidly growing approach to qualitative inquiry. Aiming to fully describe lived experiences, IPA is committed to the examination of how people make sense of their major life experiences (Smith 1996). Data for the study was collected in retrospect, through face-to-face, one-on-one, semi structured interviews that lasted approximately one hour. The study had a three-part design: the first study was a single case study; the second was with mothers who exclusively breastfed for six months; and the third study was with mothers who did not achieve exclusive

breastfeeding for six months. All interviews were transcribed verbatim and analysed using Smith et al's (2009) seven steps of analysis. **Results:** The qualitative analyses will be presented as a narrative account where the researcher's analytical interpretations are presented in detail and supported with verbatim extracts from participants. In IPA, the role of the researcher is to endeavour to make sense of the participant trying to make sense of what is happening to them (Smith et al 2009). An in-depth analysis of the case study and subsequent interviews will be the focus of this presentation. Major themes such as cultural and social influences around breastfeeding practices and relationship influences on breastfeeding will be explored. **Conclusion and implications for Policy, Practice and Education:** Combining phenomenology, hermeneutics and idiography, IPA is thought to gain a more in-depth and richer understanding of the individual's experiences. This IPA research is therefore well positioned to explore the nuances of individual's lived experiences in a local context. The deep reflection of IPA is anticipated to improve breastfeeding practices by closing the divide between policies and practical needs required by mothers and babies in the community.

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### **Rhian Cramer: Implementing the 'Supporting breastfeeding In Local Communities' (SILC) cluster randomised trial: Exploring the views and experiences of Maternal and Child Health Nurses and Coordinators.**

*Rhian Cramer, Helen McLachlan, Della Forster & Touran Shafiei. Judith Lumley Centre, La Trobe University, Victoria.*

**Aim:** To explore the implementation of an early home-based breastfeeding support intervention and breastfeeding drop-in centres for new mothers in the SILC trial, from the perspective of SILC nurses and Maternal and Child Health (MCH) coordinators. **Background:** In Victoria, Australia, breastfeeding rates vary widely between Local Government Areas and there is a widening gap between high and low socioeconomic groups, with more socially disadvantaged areas having lower breastfeeding rates (1). Community-based strategies focused on the early postpartum period might increase the proportion of mothers in areas of low breastfeeding who continue to breastfeed (2,3). A three-arm cluster randomised trial was undertaken to explore whether early home-based breastfeeding support for women by a MCH nurse (SILC-MCHN), with or without access to a community-based breastfeeding drop-in centre, increased the proportion of infants receiving 'any' breast milk at four months. Process evaluation measures were included to explore the potential sustainability of the interventions. **Methods:** Focus groups and surveys were used to explore SILC-MCHN's experiences of providing the SILC interventions and semi-structured interviews were undertaken with MCH coordinators. Audio recordings of focus groups and interviews were taken, then transcribed verbatim. Transcripts were analysed thematically and cross-coded. Survey data were analysed using frequencies and percentages. **Results/ Findings:** Thirteen of 14 SILC-MCHNs completed the survey and 12 participated in a focus group. Overall, SILC-MCHNs reported that women were very receptive to home-based breastfeeding support and that visits provided much-needed focused time on breastfeeding. They found their role to be very satisfying and felt that they could 'make a difference'. Challenges related to a lack of time, excessive documentation, and a lack of staff available for backfilling (e.g. annual leave). Drop-in centres were considered to be an important option for women, although major variations in drop-in centre attendance existed across the participating LGAs. Recruitment of volunteers (a planned component of the centres) was difficult in two of the three LGAs. Six of the seven MCH coordinators invited to participate were interviewed. All were very supportive of the SILC interventions, reporting that the interventions had been delivered as planned. Coordinators considered that the interventions were much needed and met the need for early, focused breastfeeding support provided in a potentially sustainable way by breastfeeding

experts. They reported that women were overwhelmingly positive about the support received and additional benefits included opportunities for informal breastfeeding education for MCH nurses. Challenges related to staffing (e.g. backfilling staff on leave); unforeseen expenses mostly related to travel costs (which were not funded as part of the trial); and IT/data difficulties. All reported that they would like to continue the interventions beyond the trial period but would require funding to do so. **Conclusion and implications:** This trial was designed pragmatically such that if the intervention(s) show an increase in breastfeeding they could readily be incorporated into practice. From the perspective of the SILC-MCHNs and coordinators, the home visiting intervention was acceptable and likely to be sustainable. Drop-in centres posed greater challenges with two of the three LGAs reporting low attendance by women and difficulty recruiting peer volunteers.

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### **Ruth DeSouza: Kiwi food is okay for Kiwis, but it isn't okay for us": Special food in the perinatal period for migrant mothers in Aotearoa New Zealand.**

*School of Nursing and Midwifery, Monash University*

Food, its preparation and ingestion, constitutes a source of physical, emotional, spiritual and cultural nourishment. Food structures both daily life and major life transitions, including the transition to parenthood, where food is prepared and consumed that recognises the unique status of the mother. However, the reductive focus of hospitals where efficiency, economy and a focus on nutrients dominate and where birth is viewed as a normal event can mean that there is a mismatch between the cultural and religious dietary needs of migrant mothers with the food that is available from Western institutional environments. In this paper I outline a research study, which examined the transition to parenthood among new migrant groups in New Zealand. Based on a number of focus groups with mothers and fathers, the data were analysed using a postcolonial feminist lens and drew upon Foucauldian concepts to examine the transition to parenthood. The findings show that Asian new migrant parents construct the postnatal body as vulnerable, requiring specific kinds of foods to facilitate recovery from the trials of pregnancy and delivery and optimize long term recovery from pregnancy. This discourse of risk contrasts with the dominant discourse of birth as normal, and signals the limitations of a universal diet for all postnatal mothers, where consuming the wrong food can pose a threat to good maternal health. Paying attention to what nutrition and nurturing might mean for different cultural groups during the perinatal period can contribute to long term maternal well-being and cultural safety. Health practitioners need to understand the meanings and significance attached to specific foods and eating practices in the perinatal period. I propose that institutional arrangements become responsive to dietary needs and practices by providing facilities and resources to facilitate food preparation.

### **Louise Duursma: Breastfeeding peer and professional support: a review of a drop-in service.**

*Louise Duursma & Dr Elaine Burns. Australian Breastfeeding Association and School of Nursing and Midwifery, University of Western Sydney.*

**Background:** The Australian Breastfeeding Association (ABA), amongst other activities, offers a 24 breastfeeding helpline, local peer support group meetings and training for breastfeeding peer counsellors and educators. In 2011, a Breastfeeding Lounge was developed to fill a perceived gap in service provision for women with ongoing breastfeeding problems who required face-to-face support from a dedicated, and free, breastfeeding service. This service was exclusively focussed on breastfeeding support and was located at the NSW ABA branch office in Castle Hill. The service was not designed to replace existing services but rather to complement services, such as Child and Family

Health, by offering an opportunity for women to access 'breastfeeding-specific' support for ongoing breastfeeding problems. The 'ABA Breastfeeding Lounge' drop-in service was available to all mothers, without an appointment, one day per week. The service was provided by two to four ABA counsellors, two of whom were International Board Certified Lactation Consultants (IBCLC). Whilst the service was offered free of charge to all who presented, women were encouraged to join the Australian Breastfeeding Association to ensure that they had access to ongoing peer support. Confidential records were kept after every consultation detailing; the reason for presentation, the support offered and the suggested actions. Mothers were encouraged to return to the service as often as necessary for ongoing face-to-face peer support. Women were also linked into their local ABA peer support group. The breastfeeding lounge was not advertised externally and referrals came from ABA volunteers, other mothers and a variety of health professionals. **Aim:** This study aims to explore women's experiences of attending an Australian Breastfeeding Association drop-in service for breastfeeding support. The study will capture the reasons for presenting to the service, the support provided, and the breastfeeding outcomes following engagement with the service. **Method:** Phase 1: Participant observation was used to observe, and audio record, individual interactions between breastfeeding women and an ABA peer breastfeeding counsellor at the Breastfeeding Lounge. Phase 2: A retrospective file audit and an online survey was conducted to capture women's reasons for accessing the service, the service provided and the outcomes over a two year period. **Findings:** The observation of 10 breastfeeding interactions, and subsequent interviews with 8 women, revealed a high level of satisfaction with the Breastfeeding Lounge service and a significant impact on solving breastfeeding difficulties. The Phase 2 findings capture women's satisfaction with the service, their breastfeeding experiences prior to attending the drop-in centre, reasons for presenting to the service, support provided, and breastfeeding outcomes. Breastfeeding duration and achievement of individual personal breastfeeding goals will also be discussed. **Implications for Practice:** In most instances women found the ABA Breastfeeding Lounge service after having many consultations with health professionals. The support provided by peer counsellors at ABA was preferred by women and was found to be very helpful. This initiative offers women an ongoing face to face contact during breastfeeding difficulties in one locality only. Further work is required to explore the development of this initiative in other localities.

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### **Mary-Ann Davey: Intervention in labour and early breastfeeding outcomes.**

*Mary-Ann Davey & Katharine Gibson. Judith Lumley Centre, La Trobe University, Melbourne, Australia and Clinical Councils Unit, Department of Health, Melbourne, Australia.*

**Background:** Midwives report on three breastfeeding items in the immediate postnatal period for all babies born in Victoria, Australia: initiation of breastfeeding; any infant formula given during the postnatal hospital stay; and whether the last feed before discharge was taken entirely and directly from the breast. **Method:** Comparison of proportions and multivariate logistic regression were performed. **Results:** Of the 69,143 women who gave birth to term, liveborn babies in 2009, 96.3% initiated breastfeeding. 77.8% of the women who initiated breastfeeding gave the last feed before discharge entirely and directly from the breast. Women who experienced a number of interventions in labour and birth were more likely than others to have a problem with this. Oxytocin infusions to induce or augment labour (Relative Risk (RR) 1.26, 95% CI 1.2, 1.3), epidural analgesia (RR 1.36, 95% CI 1.3, 1.4), and caesarean section (RR 1.58, 95% CI 1.5, 1.6) were all associated with giving some expressed breastmilk or formula at the last feed before discharge. Babies whose mothers experienced these interventions were also more likely to be given formula during their hospital stay (oxytocin infusions (RR 1.18, 95% CI 1.1, 1.2), epidural analgesia (RR 1.30, 95% CI 1.26, 1.34), and caesarean section (RR 1.70, 95%CI 1.65, 1.75)). These relationships remained strong after

adjustment for parity, BMI, maternal age, admission status, smoking during pregnancy and socio-economic status. **Conclusions:** Common interventions in labour and birth are associated with early breastfeeding problems. Maternity care providers and women need to take this into account when making decisions about the risks and benefits of any given intervention.

### **Jessica De Bortoli and Lisa Amir: Factors associated with delayed onset of lactation in a Baby Friendly Hospital.**

*De Bortoli, J., Amir, LH., Forster, DA., & McLardie-Hore, F. Judith Lumley Centre, La Trobe University, Melbourne, Australia.*

**Aim:** To describe the factors associated with delayed onset of lactation in a Baby Friendly Hospital.

**Background:** Lactogenesis I is when the alveolar epithelial cells change into lactocytes (secretory epithelial cells) and occurs during pregnancy. Lactogenesis II, the onset of copious milk secretion, usually occurs between 24 and 48 hours postpartum. [1] Maternal perception of onset of lactation > 72 hours postpartum is considered delayed onset of lactation (DOL). [2] A recent large US survey found DOL in 23% of women. [3] Studies have found that primiparity and caesarean birth are associated with delayed lactogenesis. High BMI is also thought to be associated with delayed lactogenesis, and a contributing factor to early cessation of breastfeeding in women over their ideal weight. [5] **Methodology:** This project is a supplementary study to the DAME (Diabetes Antenatal Milk Expression) randomised controlled trial. The DAME trial is investigating the efficacy and safety of antenatal colostrum expression for mother, fetus and infant. This supplementary project will compare the timing of the onset of lactation in women in the comparison arm of the DAME trial to a sample of women who do not have diabetes in pregnancy. The DAME trial is still underway, so only the results of women without diabetes in pregnancy have been analysed here. **Data measures:** Maternal perception of milk “coming-in” – the feeling of breast fullness – is a valid measure of lactogenesis II, with strong correlation with biochemical markers. [2] We also collected possible confounding factors including parity, method of birth and maternal BMI. Women without diabetes in pregnancy were recruited in the postnatal wards at the Royal Women's Hospital, Melbourne, between 24 and 72 hours postpartum (February to April 2014). Data collection is via structured questionnaires at recruitment (in person) and 7-10 days postpartum (telephone). Sample size calculations indicated two groups of 179 women are needed to ensure we can find a clinically significant difference in lactogenesis (if one exists) between the groups. We aimed to recruit 200 women without diabetes to allow a loss to follow-up of 10%. **Results:** 210 women were recruited. Most women were married/living with partner (98%), and Australian-born (57%). The average infant gestation was 39 weeks, and 74% had skin-to-skin contact within one hour of birth. At follow-up, the infant's mean age was 9 days (range 6 to 21); 70% were fully breastfeeding at the breast and only 1% were fully formula feeding. The following factors were associated with DOL: primiparity, induction of labour, caesarean birth, spinal/epidural analgesia and infant's first feed not directly from the breast. **Conclusion and implications:** It is important to understand the factors related to delayed lactation, in particular potentially modifiable factors such as not feeding directly from the breast.

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### **Dawn Eccelston: Vitamin D: the magic hormone!**

*School of Health, University of Central Lancashire, UK.*

**Aim:** The aim of this paper is to identify the importance of practitioners recognising the role and function of vitamin D. It will discuss the relationship of vitamin D to calcium, phosphate and

parathyroid hormone functioning. Factors which may lead to vitamin D deficiency, epidemiology, sources of vitamin D and its metabolism are also considered. **Background:** Many papers report that a quarter of all toddlers are deficient in the nutrient and that childhood rickets is on the rise. It has several important roles in the body, including regulating the balance of nutrients needed for strong, healthy bones. The chief medical officer for England is currently recommending that vitamin D supplements are routinely given to at risk groups. **Methods:** A literature search was conducted using MEDLINE and CINAHL databases. Terms used were Vitamin D; vitamin D deficiency; calcium deficiency; rickets, parathyroid function and nutritional content of breast-milk. The library was also accessed. **Results/Findings:** Vitamin D is a group of pro-hormones that affect cellular function. The endocrine system regulates and controls the synthesis of the active form of vitamin D. It is synthesised by the body and, along with its role in regulating calcium, phosphate and parathyroid hormone, is essential in maintaining skeletal health. It is thought that Vitamin D also has a role in regulating cell growth, neuromuscular and immune function, and reduction of inflammation. Ongoing research is investigating the various other functions vitamin D might perform in the body. Vitamin D deficiency has increased in recent years. Without adequate vitamin D, bones can become thin, brittle and misshapen. In extreme cases this can lead to rickets in children, and osteomalacia in adults, which may cause pain and muscle weakness. Supplementation can aid in the prevention of these diseases. Current advice states that most people can obtain adequate vitamin D by exposure to sunshine and eating a healthy balanced diet. However certain people may be at risk of deficiency. These include pregnant and breastfeeding women, all children under 5 years old, people over 65, people who are not exposed to much sun, such as the housebound, and darker skinned people. Ultra-Violet-B (UVB) is absorbed by the epidermal layer and plays a key role in vitamin D formation. As dietary sources of vitamin D are minimal, the major source is exposure to sunlight, particularly UVB. Another advantage of UVB exposure in formation of vitamin D is that UVB exposure does not result in excessive production of vitamin D, which may result in intoxication **Conclusion:** Vitamin D deficiency is a global problem. Research states that it is reaching epidemic proportions. It is currently being linked with the pathogenesis and progression of various diseases. Increased use of sunscreen is thought to be a factor in the increased prevalence of vitamin D deficiency. Although there is evidence which demonstrates the close links of vitamin D with health, deficiency is not widely recognised as a problem by health staff. Policy makers need to recognise the need for supplementation and a much greater awareness is required by clinicians, educators and medical researchers. It is recommended that public health practitioners acknowledge the importance of vitamin D for normal body function and the means of prevention and treatment of vitamin D deficiency.

### **Rakime Elmir: “I felt like a failure”: women’s experiences of breast feeding following birth trauma.**

*School of Nursing and Midwifery, University of Western Sydney, Sydney, Australia.*

**Aim:** To report on women’s experiences of breastfeeding following severe postpartum haemorrhage and emergency hysterectomy. **Background:** Unexpected birth outcomes such as a severe postpartum haemorrhage (PPH) and emergency hysterectomy impact significantly on women, resulting in symptoms or a diagnosis of posttraumatic stress disorder in a small percentage of women (Beck, 2004a,b). Severe PPH and emergency hysterectomy can negatively impact on women’s early mothering practices and breastfeeding and has consequences for her relationship with her partner and family. Following an adverse birth outcome, women are sometimes transferred to the Intensive Care Unit (ICU) for close monitoring and may be separated from their babies for several days (Pollock, 2006). Often, little regard is paid to the emotional needs of women in this immediate post birth period and her desire to be close to her baby and breastfeed (Rowe-Murray & Fisher, 2001). **Methods:** A qualitative approach was used to study the experiences of women who had a hysterectomy following a severe PPH. Data were collected through semi-structured face-to-face, telephone interviews or email correspondence from 21 Australian women. **Findings:** Two major themes were identified: ‘initial separation: lost bonding time’ and ‘feelings of failure’. Women who

were transferred to ICU were separated from their babies, sometimes for up to 3 days. During this time, they were not able to breastfeed and felt they missed an important time to bond with their babies. For this reason, many of the women wanted desperately to succeed at breastfeeding but this was not always possible. **Conclusion:** The experience of becoming a mother following a traumatic birth event such as a severe postpartum haemorrhage and emergency hysterectomy is extremely distressing for women and can disrupt their sense of identity as a mother. Implications for policy, practice and education: It is important for midwives and other professionals to understand the consequences of this experience and imperative that follow-on care and support is provided. Women need to discuss the series of events that led to her requiring a hysterectomy, in an effort to mitigate feelings of failure and self-blame. Recommendations for future policy development in ICU will be considered in this presentation and the potential to accommodate mother and baby and minimise maternal-infant separation.

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## **Narelle Fagan: Baby Friendly Health Initiative (BFHI) 7 Point Plan for Community Health Services working towards implementation of the BFHI 7 Point Plan in Western Sydney Local Health District.**

*HealthOne Western Sydney Local Health District, Sydney, Australia.*

**Aim:** This presentation will outline the key partnerships, in particular the Australian Breastfeeding Association and the Medicare Local, achievements to date, key enablers with view to sharing our learning regarding the work towards implementation of the BFHI 7 Point Plan for Community Health. **Background:** The Baby Friendly Health Initiative (BFHI) 7 Point Plan for Community Health is one of the global strategies designed to protect, promote and support breastfeeding. The NSW Ministry of Health has endorsed this strategy through the NSW Health Breastfeeding Policy Promote Protect and Support Breastfeeding (PD2011\_042). The BFHI strategies have been successful in increasing initiation and duration of breastfeeding globally. A local Western Sydney Community Health multidisciplinary BFHI 7 Point Plan Promote Protect and Support Breastfeeding Project Working Group has been working towards implementation of the BFHI 7 Point Plan. The Western Sydney population is very diverse in terms of Cultural and Linguistic Diversity, socio economic disadvantage and Aboriginal and Torres Strait Islander backgrounds. These populations are at risk of not meeting the World Health Organisation recommended breastfeeding targets. **Methods:** The implementation of the BFHI 7 Point Plan is a work in progress conducted through a Community Health Multidisciplinary Working Group. The working group consists of representatives from Australian Breastfeeding Association, Medicare Local, Child & Family Health, (Nursing, Allied Health), Administration, Management and Multicultural Health, with links to Aboriginal Health Services and Health Promotion. **Results/Findings:** Our experience in implementing the BFHI 7 Point Plan locally has interestingly mirrored our colleague's experience internationally. The importance of executive sign on and reporting has been crucial, having executive champions has assisted greatly. Linking with the Quality Improvement stream has also been beneficial. Identifying and obtaining funding has boosted the morale of the Working Party and assisted promotion of the project. One of the most important aspects of the BFHI implementation progress has been the involvement of the Australian Breastfeeding Association (ABA) representatives. This partnership has allowed us to view the issue from the community perspective, benefit from the sharing of resources, benefit from the identification of issues that may not have been obvious to health staff and has brought the voice and presence of the community to the table. Examples of the partnership have been the co-presentation (with ABA) of BFHI education sessions to health staff and coordination of events with local ABA groups. The events have been attended by politicians. Medicare Local partnerships have

been formed more recently in 2013 culminating in the Medicare Local hosting the Community Health World Breastfeeding Week celebration in August and generously contributing to the production and distribution of breastfeeding resources produced by the BFHI Working Party. The Medicare Local partnership has also resulted in GP Breastfeeding training sessions conducted by the ABA with presentation from Community Health staff and Culturally and Linguistically Diverse Community Mentor training sessions provided in 2013. **Conclusion:** By the end of the session the participants will have increased knowledge of strategies which may enable the implementation of the BFHI 7 Point Plan for Community Health in their own services. They will be able to identify key partnerships and strategies to engage such key partners to assist the implementation and community reach of the BFHI 7 point plan and will be able to make comparisons between the BFHI 7 Point Plan for Community Health and the Ottawa Charter which outlines health promotion foundations including: Build Public Policy, Develop Personal Skills, Create Supportive Environments, Reorient Health Services. **Implications for policy, practice and education:** Policy implementation is not always easy; we have found that there are particular enablers and challenges along the way.

### **Della Forster: A randomised controlled trial of caseload midwifery for women at low risk of medical complications (COSMOS): breastfeeding intentions, initiation and two month feeding outcomes.**

*Forster DA., McLachlan HL., Davey MA., & Flood M. Judith Lumley Centre, La Trobe University, Melbourne, Australia, Royal Women's Hospital, Melbourne, Australia; and the School of Nursing and Midwifery, La Trobe University, Melbourne, Australia.*

**Aim:** To compare (by trial arm) the breastfeeding intentions and outcomes of women included in a randomised controlled trial (RCT) of continuity of midwifery care. **Background:** Although breastfeeding initiation is high in Australia, by six months only 61% of infants are receiving any breast milk (1), and the gap between infants in disadvantaged and advantaged circumstances is increasing (2). Very few interventions have been successful in increasing breastfeeding, particularly in women with low breastfeeding intention. An intervention that may increase breastfeeding is continuity of maternity care provider. We conducted an RCT comparing caseload midwifery care (also known as Midwifery Group Practice and Know Your Midwife) with standard care. In addition to measuring birth outcomes we explored infant feeding outcomes (reported here). **Methodology:** In this two-arm RCT, pregnant women at low obstetric risk were recruited from a tertiary hospital in Melbourne between September 2007 and June 2010. Women randomised to caseload care received antenatal, intrapartum and postpartum care from a primary midwife, with one or two antenatal visits from a 'back-up' midwife. Women allocated to standard care received midwifery-led care with varying levels of continuity, junior obstetric care or community-based GP care. Ethics approval was provided by the Royal Women's Hospital and La Trobe University. Information on women's breastfeeding intentions was collected by self-completed questionnaire at recruitment (in early/mid pregnancy). Infant feeding in hospital was collected from the medical record, and breastfeeding status at two months was collected by postal questionnaire. **Results:** 2314 women were randomised – 1,156 to caseload and 1,158 to standard care, of whom 81% responded to a postal survey sent at two months postpartum. At recruitment there was no difference in the proportion of women planning to breastfeed for six months or more – 74% (caseload) vs. 72% (standard) ( $p=0.49$ ). More women in standard care did not initiate breastfeeding (1.8% vs. 0.7%;  $p=0.01$ ). At two months there was no difference in the proportion of infants receiving any breast milk (caseload 87.6%, vs. standard 87.5%;  $p=0.97$ ) or only breast milk (74.9% vs 73.9%;  $p=0.66$ ). Adjusting for parity did not change the results. **Conclusion and implications:** In a setting with high breastfeeding initiation caseload care reduced the proportion of women who did not initiate breastfeeding but made no difference at two months postpartum. Further analysis taking into account potential confounders will be undertaken and presented, to inform future work in this area.

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## **Karleen Gribble: Rights of children in relation to breastfeeding in child protection cases.**

*School of Nursing and Midwifery, University of Western Sydney.*

**Background:** Social workers have a responsibility to protect and uphold the human rights of their clients (British Association of Social Work, 2002). For those individuals and organisations involved in child protection, the rights of children, as outlined in the United Nations Convention on the Rights of the Child (UNCRC), provides essential guidance. The UNCRC supports the proposition that children have rights in relation to breastfeeding (OHCHR, 1990). This means that child protection workers and authorities have a responsibility to ensure that their interventions support and do not undermine mothers in breastfeeding their children. Furthermore, the impact of early cessation of breastfeeding in increasing health inequities and risk of child neglect only adds to the imperative for child protection interventions to support breastfeeding continuance (Quigley, Cumberland, Cowden and Rodrigues, 2006, Strathearn, Mamun, Najman, O'Callaghan, Strathearn, Mamun, Najman and O'Callaghan, 2009). **Case Studies:** Two case studies from the United Kingdom are presented in which child protection authorities had interactions with a breastfeeding mother and child. In the first case, child the child protection intervention resulted in the early and permanent cessation of breastfeeding. In the second case, active advocacy allowed breastfeeding to continue. However, in both cases the mothers' insistence that breastfeeding was important to their children and should continue was pathologised. Rather than being regarded as a strength breastfeeding continuance was considered to provide proof of poor parenting capacity. Recommendations The case studies presented here are not unusual. They highlight a lack of understanding amongst child protection workers of the role of breastfeeding in supporting the health of children and in promoting parenting capacity in mothers. It is therefore recommended that child protection authorities develop policies and institute training for the protection of breastfeeding during child protection investigations. The following points describe how child protection authorities might support children's rights in relation to breastfeeding. 1) Have policies in place that recognise the rights of breastfeeding children and provide training to staff on these policies and the reasons for their existence. Such policies should underline that breastfeeding itself, regardless of the age of the child, is not a cause for concern. 2) Explore options for keeping mother and child together while child protection investigations proceed. 3) If physical separation of mother and child is unavoidable: ensuring that frequent contact between mother and child is facilitated, during which time breastfeeding is encouraged; providing a double electric breastpump and expression containers to the mother; providing lactation support to the mother; enabling transport of breastmilk to the child; education of the foster carer on the importance of breastfeeding, the storage and feeding of expressed breastmilk and the behaviour of breastfed infants.

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## **Heather Grimes: Pass it on: A study of the experiences of volunteers providing telephone support to breastfeeding mothers in a randomised controlled trial.**

*H. Grimes: Supervisors: Professor Della Forster, Associate Professor Helen McLachlan & Dr Touran Shafiei. Judith Lumley Centre, La Trobe University, Melbourne, Australia.*

**AIM:** The aim of this study is to explore the views and experiences of volunteers providing proactive telephone support to breastfeeding mothers participating in a randomised controlled trial (RCT). It also aims to identify strategies for recruitment, management and retention of volunteers. **BACKGROUND:** The World Health Organization (2003) recommends that infants receive only breast milk for the first six months of life. In Australia only 60% of infants receive any breast milk at six months of age (Australian Institute of Health and Welfare 2011). The provision of telephone peer support to breastfeeding mothers may increase the duration of breastfeeding (Amir, Forster et al. 2010). An RCT is currently underway to test this intervention in the Australian context (the RUBY study). The trial's primary outcome is to determine if proactive telephone peer support in the postnatal period increases the proportion of infants receiving any breast milk until six months of age. There is currently little evidence that describes the experience of volunteers, or the feasibility of programs, providing proactive peer support in the health setting, or in relation to breastfeeding support. **METHODS: Study design:** This study is embedded in the RUBY study, a two-arm RCT, recruiting women from three Melbourne hospitals. Women in the intervention arm are allocated a peer volunteer who provides breastfeeding support by telephone according to a specific call schedule, for up to six months postpartum. **Participants:** Volunteers who have breastfed for at least six months and undertake a four hour training session. **Data collection:** Quantitative data are collected from volunteers when they commence, by completion of a call log during support of individual mothers, and by online survey at trial completion. **RESULTS:** Recruitment to the RUBY study commenced in February 2013. Volunteers are recruited using a variety of methods including posting information on relevant social media and internet sites. Almost 300 volunteers have expressed interest in providing peer support, 115 have undertaken the necessary training and most have commenced supporting a mother. Data collection is underway. **CONCLUSION:** The level of interest in volunteering for this program has been high. Findings will be presented at the conference. The outcomes of this study will inform the sustainability of future peer support programs in the health context.

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## **Jacqueline Gould: The Role of Dietary Omega-3 Fatty Acid DHA During Pregnancy in Child Brain Development.**

*Jacqueline F Gould, Lisa G Smithers, Maria Makrides & Robert A Gibson. Women's and Children's Health Research Institute, University of Adelaide, and South Australian Health and Medical Research Institute.*

The last trimester of pregnancy is the period during which the fetal brain is growing at its greatest velocity and accumulation of omega-3 long chain polyunsaturated fatty acid docosahexaenoic acid (DHA) in neural tissues is at its peak. There have been several RCTs to investigate the effects of DHA supplementation during pregnancy, but the results have mixed and inconclusive, largely due to methodological limitations including post-randomisation exclusion, lack of long-term follow-up, high attrition, lack of power and absence of measures targeting specific cognitive skills such as executive functions. Despite the paucity of evidence, recommendations exist internationally for women to increase DHA intake during pregnancy and the nutritional supplement industry markets prenatal DHA supplements to optimise fetal brain development. There has been a call for quality RCTs with sufficient sample sizes and follow-up rates, and for nutrition researchers to use specialised measures of cognitive functions that are appropriate for assessing the specific neural systems thought to be affected by an intervention, rather than global measures. The DOMInO trial is a large, multi-centre double-blind RCT of DHA supplementation during pregnancy with a sufficient sample to be powered to detect an effect. Pregnant women were supplemented with 800mg DHA/day or a placebo and child development has been assessed at 18 months, two years and four years of age with a variety of measures. At 18 months of age children were assessed with the Bayley-III (n=726, <5% attrition) and

although there were no group differences in scale scores, DHA group children had fewer instances of delayed development yet poorer language scores (girls only) compared with controls. However, measures beyond 2 years of age are essential as some elements of neurodevelopment are not measurable in early life and assessment of developmental delay before 20 months has been shown to be a poor predictor of later cognitive functioning. At 2 years of age a subgroup of healthy children were assessed with an experimental measure of the executive functions attention, working memory and inhibitory control (n=186, <15% attrition). No differences in abilities between the groups and no association with cord blood DHA at birth were found. At four years of age child cognitive, executive function, behaviour and language development were assessed with the DAS II, BRIEF, Day-Night Stroop, Strength and Difficulties Questionnaire and CELF-P2 (n=703, <10% attrition). Objective measures of cognition, executive function and language showed no differences between the groups but subjective measures showed poorer behaviour and executive functioning in the DHA group (although all outcomes were within clinically normal ranges). The findings of the DOMInO trial show that benefit to offspring development should not be used as motivation to consume DHA supplements.

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### **Madhu Gupta: Mixed methods approach to explore determinates of persistent maternal anaemia in Chandigarh, North India.**

*Nadia G. Diamond-Smith<sup>1,2</sup>, Madhu Gupta<sup>1</sup>, Manmeet Kaur<sup>1</sup>, Rajesh Kumar<sup>1</sup>*

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**Purpose:** Maternal anemia continues to be a public health problem in India despite existence of multipronged governmental program to combat it. This study planned to ascertain the determinants of persistent maternal anemia. **Methods:** Mixed method approach (qualitative and quantitative) used to examine the causes of maternal anemia in Chandigarh. Three focus group discussions with 17 pregnant women from different socioeconomic groups and two with 11 female health workers conducted to explore their perceptions and beliefs about maternal anemia and Iron Folic Acid (IFA) tablets in urban settings in 2009. This was followed by interview of 120 pregnant women who attended antenatal clinics about their knowledge and practices of daily intake of food and IFA tablets. Food frequency questionnaire and 24 hour recall chart used to estimate daily consumption of nutrients. **Results:** Eighty seven of 120 respondents had undergone haemoglobin (Hb) testing. Fifty seven (65%) of 87 respondents had Hb less than 11g/dl and were anemic. Only 35% respondents obtained free IFA through public health programs. While 53% of respondents knew that they should eat green leafy vegetables, but only 8% reported daily consumption of these vegetables. Mean dietary allowance for iron (22 mg) was far below the recommended levels (35 mg). From FGDs it was learnt that pregnant women had little decision making power about what and when to eat. **Conclusions:** Main contributors to the persistence of anemia were gaps in pregnant women's knowledge and practice regarding diet and IFA tablet use and lack of control over decision making about what should be cooked for the family due to their low status.

## **Catherine Helps: Exploring Infant Feeding choices in a Northern New South Wales Aboriginal Community.**

*Catherine Helps; research supervisor- Professor Lesley Barclay & cultural mentor Brenda Holt. Midwifery Educator with the NSW Training and Support Unit for Aboriginal Mothers Babies and Children.*

**Aim:** To explore the ways in which first time Aboriginal mothers in a rural area of Northern New South Wales make choices about their infant feeding methods. **Background:** It has been observed in previous studies (1) and in local and state data collections that Aboriginal women in NSW have lower rates of both initiation and duration of breastfeeding than Non-Aboriginal women. Higher levels of breastfeeding would offer significant protective benefit for Aboriginal infants and children. The information from this study adds to the understanding of the historical, cultural and personal factors that influence the decision making pathway of young Aboriginal mothers. **Methods:** Indigenist methodology has guided this qualitative study (2). A high level of collaboration with Aboriginal Health Workers, cultural mentors and Aboriginal Medical Services has been engaged at all levels of the design, implementation and interpretation of the study. 'Yarning' style interviews were conducted during pregnancy with eight first time Aboriginal mothers and these same women were interviewed when their babies were two months old. Five Aboriginal Health Workers were also interviewed. Thematic analysis was conducted with ongoing advice from Aboriginal mentors. **Results/Findings:** There cannot be a discussion regarding the experiences of contemporary Aboriginal women and Communities that does not acknowledge the pervading impact of historical events. An outline of the history of Northern NSW and the apparent impact on infant feeding choices is an important prelude to a discussion of the findings in this study. Three primary themes have emerged from the interviews. 'Best for baby' is identified as the key driving force for maternal decisions about infant feeding. The pathways through which 'best for baby' changes in the early postpartum period are explored within these women's stories. 'Societal influences' emerge as a strong theme in the women's stories. This includes the pervasive presence of infant formula in women's awareness and a strong sense of societal condemnation of public breastfeeding. The third theme identifies that existing pathways for knowledge transfer and education regarding infant feeding are not effective in reaching these young women. **Conclusions:** The complexity of infant feeding decisions impacts all mothers to various degrees (3). National and State Health policies identify that young Aboriginal women are amongst the most important and the most difficult to target in the aim to improve breastfeeding duration (4). A greater understanding of the influences of culture, history, knowledge base and motivating factors for these women inspires a deeper appreciation of the complexity of their experiences. Only from this stand point can the relevance, impact and potential improvements to public health policy regarding infant feeding be addressed with these young Aboriginal mothers.

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## **Marjolaine Héon: Mothers' acceptability and experiences of breast milk expression at their preterm infant's bedside – A pilot study.**

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**Background:** Mothers who give birth prematurely struggle to establish and maintain a sufficient breast milk production. Insufficient breast milk production is one of the major barriers that compromise breastfeeding in preterm infants. Breast milk expression at the preterm infant's bedside is a recommended intervention to enhance breast milk production. However, this intervention is

based on anecdotes rather than research-based evidence; some mothers report that expressing at their preterm infant's bedside increases breast milk volume (Hurst & Meier, 2010). It is hypothesized that this intervention maximizes mother-infant contacts, and thus increases the stimulation of oxytocin, a hormone associated with breast milk production and maternal attachment. Nevertheless, to date, there is no research-based evidence supporting this intervention and although few studies (Björk et al., 2012; Hurst et al., 2013) have explored mothers' experiences of breast milk expression at the neonatal unit, none have focused specifically on their experiences of breast milk expression at their preterm infant's bedside. **Aim:** The aim of this pilot study with a mixed method evaluation is to assess mothers' acceptability and explore their experiences of breast milk expression at their preterm infant's bedside. **Methods:** A total of 40 mothers of preterm infants born at <30 weeks of gestation and admitted to a NICU of a university health centre will be recruited and randomly assigned either to the control (breast milk expression in room reserved for this purpose, according to usual care) or experimental (breast milk expression at the preterm infant's bedside) group. In the experimental group, at the end of the study, mothers' acceptability of the experimental intervention will be evaluated through a questionnaire based on Sidani and Braden's (2011) acceptability criteria. As for their experiences of breast milk expression at their preterm infant's bedside, they will be assessed through an adapted version of the Personal Experience Subscale of the Breast Milk Expression Experience Questionnaire (Flaherman et al., 2013). In order to further assess mothers' acceptability of breast milk expression at their preterm infant's bedside and explore their related experiences, an individual semi-structured interview with open-ended question will be conducted with these mothers. Interviews will be recorded and transcribed for conventional content analysis. **Results:** As the recruitment is still in progress, results are to come. **Conclusion:** This pilot study has the potential to contribute to the development of knowledge on breast milk expression at the preterm infant's bedside, enlighten clinical practice, and guide future research on the promotion of breast milk production in mothers of preterm infants.

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## **Noeleen Horswell: The psychoemotional impact of BFHI education on health workers.**

*Noeleen Horswell and Trish Doyle, Nepean Blue Mountains Local Health District.*

The Baby Friendly Health Initiative (BFHI) 7 Point Plan for Community Health is one of the global strategies designed to protect, promote and support breastfeeding. The NSW Ministry of Health have endorsed this strategy through the NSW Health Breastfeeding Policy Directive (PD 2011\_042) - Promote Protect and Support Breastfeeding. This PD requires Community Health Services, including Child and Family Health Services to implement the BFHI Australia 7 Point Plan for Community Health Services. In 1993 Australian Maternity Units commenced the introduction The BFHI 10 steps to successful breastfeeding. The evidence suggests that this simple strategy has been very successful in increasing initiation and duration of breastfeeding (Pe´rez-Escamilla 2006). International evidence has shown that the BFHI 7 Point Plan complements the BFHI 10 Steps. In 2010 Western Sydney and Nepean Blue Mountains Local Health Districts Community Health Child and Family Health Services formed a multidisciplinary BFHI 7 Point Plan Promote Protect and Support Breastfeeding Project Working Group with representation from NSW Branch President of the Australian Breastfeeding Association. The working group has since split into the respective Local Health Districts (LHD's) both LHD's remain committed to working towards implementation of the BFHI 7 Point Plan and eventual accreditation as mandated in the NSW Health PD for Breastfeeding. This presentation will outline the achievements, enablers, challenges and will share the learning regarding the implementation of

the BFHI 7 Point Plan for Community Health. This will include the experience from the Health clinician's perspective and from that of the participants' perspective in educating all Community Health staff regarding implementation of this important population health initiative the BFHI 7 Point Plan as set out in Point 2 of the BFHI plan. The average community health workforce are mainly women, often middle aged with personal and clinical experience of breastfeeding practice and personal experience which is not reflective of current evidence based practice and which may occasion an emotional response (Meneses 2013 and Bettinelli M, Chapin E, Cattaneo A 2012), Strategies will discuss dealing with individual health staff and their own personal lived experience of either having an enjoyable breastfeeding experience or one where the presenters of the education session have needed to be prepared to provide opportunistic psycho-emotional and debriefing support as participants have shared with the group and the presenter their past distressing breastfeeding experiences. For some Community Health staff this has often been the first time they have felt safe to share their own breastfeeding story whilst being educated in Point 2 of the BFHI plan. This disclosure can be challenging within a group educational setting **Objective 1-** The learner will be able to increase knowledge of the strategies which enable the implementation of the BFHI 7 Point Plan for Community Health in their own services. **Objective 2-** The learner will be able to facilitate reflection within the audience participating in breastfeeding education sessions. The learner will acknowledge the participants feelings, values and beliefs and be aware of the need at times to provide brief psycho-emotional intervention when dealing with distressed participants'.

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### **Helene Johns: Exploring breast pump use in a group of Australian women: the Mothers and Infants Lactation Cohort (MILC) study.**

*Johns, HM., Forster, DA., Amir, LH., McLachlan, HL., Moorhead, AM., Ford, RL., & McEgan KM. Judith Lumley Centre, La Trobe University, Melbourne, Australia.*

**Aim:** To explore breast pump uptake and use amongst a group of postpartum women in Melbourne, Australia. To discuss the use of various breast pumps, factors related to their uptake and implications of the increasing technologising of breastfeeding. **Background:** While the benefits of breastfeeding are well known and most women initially breastfeed, many also feed their infants expressed breast milk (1). Although expressing one's breasts and subsequently feeding the infant by means other than directly from the breast may appear to some to be counterproductive, or at least double handling, this practice has become increasingly common (2). Using a pump to obtain breast milk is not a new phenomenon but the practice is increasing, particularly as many women expect to express and prepare for this prior to giving birth (3). Data for this paper were collected as part of the Mothers and Infants Lactation Cohort (MILC) study. **Methodology:** We recruited over 1000 women from three Melbourne hospitals, two public and one private. Women had a healthy singleton term infant, intended to breastfeed and spoke English-. Data for this prospective cohort study were collected between 2009 and 2011; recruitment was undertaken face-to-face 24 to 48 hours postpartum, and by telephone interview three and six months later. **Results:** At the time of the six month interview, 425 women possessed a manual pump: 54% (n = 228) had an Avent ISIS and 31% (n = 132) a Medela Manual. About half the sample (n = 496) had an electric pump at six months: 33% (n = 163) had a Medela Swing, 19% (n = 93) an Avent, 15% (n = 74) a Medela Mini Electric, 12% (n = 59) a Medela Lactina and 11% (n = 52) a Medela Symphony. Incidence of frequent expressing (defined as several times a day) decreased over time: from 40% (186/466) in the first 2 weeks postpartum to 7% (49/716) at six months. The common themes describing the reasons were: parental and health professional anxiety to quantify breast milk intake; aspirations to share infant feeding alongside other parenting responsibilities, across gender roles and generations; hesitation to breastfeed in public; and consumerism. **Conclusion and implications:** Expressing breast milk is common, to the extent that feeding EBM is seen as equivalent to breastfeeding by some people. However

breastfeeding is more than just breast milk, and using EBM arguably transforms a relationship to a commodity (4). Not allowing the infant to feed at the breast deprives her/him of the otherwise associated self-regulatory benefits which may provide later protection from obesity (5).

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## **Liz Jones: The effects of neonatal nursery design on mothering in a neonatal nursery.**

*Liz Jones, Jennifer Rowe, Rachelle McMahon, Anne-Marie Feary, Timothy Hong & Sarah Woodhouse. School of Applied Psychology, Griffith University.*

**Aim:** The impact of newly designed neonatal nursery environments on mothers has not been well researched. This project compares mothers' and nurses' perceptions of nurses' support for mothering, and the mothers' parenting efficacy and bonding with their infant, when the nursery at Gold Coast University Hospital was an open bay nursery compared to when it transitioned to Single Family Rooms. **Background:** Becoming a mother of a newborn requiring neonatal care constitutes an extraordinary life situation in which mothering practices evolve in a medical and unfamiliar setting. The neonatal intensive care unit (NICU) is both a highly technological space that facilitates the delivery of health care to premature and/or sick newborns and a social place where mothers undertake activities associated with mothering. To achieve this, mothering practices must be actively supported, encouraged, and prioritised by health professionals. In recent years there has been a trend away from open plan neonatal nursery designs (OPN) to configurations that offer greater privacy such as single family rooms (SFR). These new configurations are purported to reduce infant exposure to infections and sensory stimulation, and provide a greater focus on the needs of the family, increasing opportunities for extended mother-infant contact and closeness, in turn reducing parental stress, improving parent-infant bonding, promoting breastfeeding and shortening length of stay, while potentially longer term improving health and well-being for both mothers and infants. At the same time concerns have been raised about potential drawbacks for both parents and nurses and available evidence on SFR's has produced mixed results (e.g., Harris et al, 2006; McCuskey Shepley et al, 2008; Walsh et al, 2006). Research to date has not examined how SFRs affect the relationship between mothers and nurses and, in turn, how this affects the development of the bond between the mother and her infant, and her sense of efficacy as a mother. **Method:** Gold Coast University Hospital relocated in 2013 and the neonatal nursery became one of the first nurseries in Australia to move from OPNs to SFRs. At Time 1, in the open bay nursery at Gold Coast Hospital, 26 mothers completed a survey and 12 mothers participated in an interview. Parents were asked about their psychological wellbeing, bonding, parental self-efficacy, perceptions of the physical and social aspects of the nursery environment and their satisfaction with the nursing care. 22 nurses completed a survey and 17 participated in an interview. Nurses were asked a range of questions including their perceptions of the physical and social aspects of the nursery, their interactions with parents and the factors that facilitated or inhibited family centred care in the nursery. We are currently in the process of collecting the same data in the new SFR nursery at Gold Coast University Hospital. **Findings and implications:** This paper will present findings comparing the perceptions of mothers and nurses about their relationship in the 2 nursery environments, as well as mothers' reports of bonding with their infant and maternal efficacy. Implications for nursing practice to facilitate mothering will be discussed.

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## **Lauren Kearney: Factors influencing first time parents' introduction of complementary foods: Barriers and motivators for behaviour and change.**

*Dr Lauren Kearney (presenting author), Dr Anne Walsh, Nicole Dennis. Sunshine Coast Hospital and Health Service & University of the Sunshine Coast, School of Nursing and Midwifery and Queensland University of Technology and Royal Children's Hospital.*

**Aim:** The aim of this study was to gain understanding about the factors influencing first-time parents' knowledge, attitudes and behaviours regarding the WHO recommendation to exclusively breastfeed for six months, with the then timely introduction of complementary solid foods to their infants. **Background:** The quality of early infant nutrition makes a fundamental contribution to the lifelong health and development of individuals. Global and local recommendations currently advise exclusive breastfeeding till around six months, with the introduction of nutritious solid foods to complement ongoing breastfeeding<sup>1-3</sup>. Despite strong evidence supporting exclusive breastfeeding for the first six months, current Australian data suggests many parents introduce complimentary foods earlier than six months<sup>4,5</sup>. While these data provide a clear picture of current practice, they do not explore the complexity of social, psychological and cultural factors (for example, knowledge, attitudes, social referents, and perceptions of control), which influence parental decision making. **Methods:** This study was conducted within the context of the Theory of Planned Behaviour (TPB), utilising a qualitative approach. Data were collected purposively from first-time parents, over 18 years of age, with at least one infant aged 6-12 months. A combination of focus groups and individual interviews were conducted, depending on participant availability. A total of 5 focus groups and 12 individual interviews were conducted, with 32 mothers participating in total. A semi-structured interview guide was developed to direct the interviews and was based on the TPB constructs. Data were thematically analysed<sup>6</sup>, and assumptions consistent with the TPB were held with regards to the nature of the data, and what they represented in terms of the 'world' and 'reality'. Ethical approval was obtained from the Queensland University of Technology Human Research Ethics Committee. **Results/Finding:** Modifiable factors which health professionals can address to improve the current low compliance with the WHO recommendation to exclusively breastfeed for six months were identified. While participants knew about the recommendation, they did not demonstrate a good understanding of the rationale behind the recommendation, nor did they understand fully the signs of readiness of infants to commence solid foods. Factors that assisted waiting until six months were a trusting relationship with a health professional whose practice and advice was consistent with the recommendations; and, an infant who was developmentally ready for solids and accepted them with ease and enthusiasm when delayed till six months. Barriers which prevented parents from complying with the recommendations included subjective and group norms, infant cues indicating early readiness and food labelling inconsistencies. **Conclusion:** This study provides new knowledge and understanding about the factors which influence first-time parents' decision making regarding the WHO infant nutrition recommendations. **Implications for policy, practice and education:** Educational interventions designed to change behaviours can target one or more of these factors, with subsequent alterations in intention and behaviour. Through the identification of these motivators and barriers, health care professionals can address this significant health concern with innovative, evidence based parenting education and support to improve the health of young Australians.

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## **Amanda Kvalsvig & Katherine Ebisch-Burton: Helpful and unhelpful “frames: in communication about breastfeeding.**

**Aim:** The presentation represents an opportunity for infant feeding practitioners and others interested in the field to reflect on the language and imagery which act as media for discussing breastfeeding. We aim, from the multidisciplinary perspective that arises from our very different research backgrounds, to raise awareness of the process by which the ‘framing’ (Entman, R. M. 1993) of messages and support around breastfeeding, and of scientific research in the area and its dissemination to a non-scientific public, might cause the message, as heard by mothers, to be helpful or unhelpful. The session aims to enhance professionals’ understanding of the impact of the language heard and used by mothers and those who care for them to discuss infant feeding. Attendees will acquire a basis for awareness of the language they might use when talking about breastfeeding and an opportunity to share ideas and perspectives on its impact and on potential alternative linguistic and conceptual frameworks. **Background:** Breastfeeding is frequently associated in public discourse, such as the media and the blogosphere, with connotations that obscure and transcend its essential status as a nutritive act and tap in to wider societal expectations relating to women and mothering. Expectant and new mothers may find this discourse interacting with their conceptions of infant feeding and the information they research or receive, potentially impacting on their feeding decisions. This poses a challenge for health care professionals and others who seek to support and promote breastfeeding. Health messages on the individual and public level, based on scientific findings about breastfeeding, do not reach the mother directly, but rather pass through a series of what we might call refracting ‘lenses’ which alter the course of the message and its reception. In this context, the ‘frame’ in which the message is presented is crucial. Paradoxically, messages intended to be supportive of breastfeeding risk being formulated in ‘frames’, perspectives and sets of imagery which are received by mothers as unhelpful and upsetting. **Methods:** Our approach reads discourse on breastfeeding and early mothering as text, exploring the tropes this discourse and imagery repeatedly refer to and their potential impact on mothers’ experiences of infant feeding. We have selected three distinct ways of ‘framing’ messages around breastfeeding, which, while having theoretically helpful potential, have proved problematic and in some instances unhelpful when used by health care professionals and in scientific and public health messages around infant feeding. These are: 1) the use of ‘success’ and, conversely, ‘failure’ in the context of the breastfeeding relationship; 2) the idea of breastfeeding as a ‘natural’ process or activity with strong associations to the wider perception of mothering per se as ‘natural’; and 3) the set of discourses which reference what we might summarise as ‘skill’ aspects of breastfeeding, including information on breastfeeding technique and the notion of breast milk as a resource essentially separable from the mother (cf. Burns et al. 2013). Essentially, all three sets of discourses locate responsibility around breastfeeding with the mother (on breastfeeding and the mother’s responsibility in the discursive arena cf. Ebisch- Burton 2013) in a way that can combine with wider discourses to create a counterproductive level of perceived pressure and may induce a potentially catastrophic sense of incompetence. **Findings; implications for practice and education:** Our presentation will analyse the nature of the link between research messages on breastfeeding, their communication to mothers via health care professionals and public media and the importance of the message’s linguistic and iconographic ‘framing’. Scientific findings emphasising the beneficial nature and effects of breastfeeding to mother and child have in part given rise to conceptions and categorisations of breastfeeding relationships in terms of ‘success’ or, generally rather implicitly than explicitly, ‘failure’. The research itself has not avoided this phenomenon: until recently, observational studies commonly dichotomised infant feeding as ‘breastfed’ versus ‘not breastfed’, an oversimplification that has had significant consequences for the interpretation of research findings and, in turn, for breastfeeding discourse. The emotional impact of a ‘failure’ outcome for mothers is amplified by the fact that mothers strongly associate ability to breastfeed with the quality of their parenting. Similarly, as other authors have observed, the description of breastfeeding as ‘natural’, used generally with the intent of creating positive associations with breastfeeding, proves unhelpful where a breastfeeding relationship struggles, as it may suggest to the mother that there is

something essentially deficient in her. Educational research has shown that emphasising natural ability above effort is counterproductive because it increases anxiety and decreases students' willingness to persist with a difficult task; we propose that this may also be true of breastfeeding. While the framing of breastfeeding as an essentially technical skill amenable to learning avoids this particular pitfall, it may itself be unhelpful in creating performance anxiety among mothers in the context of the wider discourse of early mothering by reinforcing the 'success/failure' frame and in removing the mother as a human factor from the equation of the breastfeeding relationship. We will provide substantial time after our presentation for attendees to contribute their own experiences and perceptions and reflect on them, and share ideas on developing more helpful 'frames' for communication with mothers and others about breastfeeding.

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### **Rachel Laws: Obesity prevention in early life: The role and practice of Maternal and Child Health Nurses in Victoria, Australia.**

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**Background:** Childhood overweight and obesity remains a significant public health challenge[1]. Formula feeding, early introduction of solids, dietary composition, physical activity and electronic media use amongst infants and young children are associated with obesity in childhood [2]. Maternal and child health (MCH) nurses have frequent contact with parents of young children, offering an unparalleled opportunity for engagement to influence family lifestyle behaviours [3]. Little is known however, about the views and practices of MCH nurses regarding obesity prevention in early life. **Aim:** This study aims to explore the knowledge, attitudes, practices and support needs of MCH nurses on preventing obesity in children 0-5 years of age. **Methods:** This was a mixed methods study drawing on a survey of 61 MCH nurses (87% response rate) supplemented with semi-structured interviews with 16 of these nurses across two local government areas in Melbourne, Australia. Survey data was analysed descriptively and interviews transcribed and coded for key themes. Survey data was triangulated with interview data to provide insight behind key obesity prevention practices, barriers and support needs. **Results:** Around three quarters of staff reported measuring height and weight in infants and young children, however almost half did not use growth or BMI charts to identify infants or children at risk of overweight or obesity. Nurses expressed concern about raising the topic of overweight with parents due to a lack of confidence in tackling the issue and concerns about low parental receptiveness. A high proportion of nurses reported routinely providing advice and support on breastfeeding (55%), when and how to introduce solids (62 and 59% respectively), limiting sweetened drinks (60%) and intake of high fat/salt/sugar foods (55%) and encouraging family meals (52%). In contrast, just over 40% of nurses reported routinely discussing active play, and less than 30% reported talking to parents about limiting young children's TV viewing and use of other electronic media. The most commonly perceived barriers to addressing obesity prevention related to parental receptiveness, including a lack of parental recognition of child overweight (65.5%), concern regarding negative parent reactions (65.5%) and perceived lack of parent motivation to change diet or lifestyle (51%). **Discussion:** MCH nurses are well placed to address obesity prevention in early childhood, however nurses need further training and support in the area of promoting active play and limiting sedentary behaviours, raising the topic of childhood overweight as an issue with parents and fundamental counselling skills.

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## **Pranee Liamputtong: Infant Feeding in a Changing Social Context: Thai Women's Perspective.**

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Breastfeeding has become an international agenda. The pressure on women to breastfeed has become increasingly pervasive. Infant feeding practices, however, continue to relate to the local moral world. In modernising societies, infant feeding practices do not exist in isolation from the cultural and socio-economic environments in which they occur (Liamputtong, 2011). Breastfeeding in any society, as such, is not problem-free. Each society perceives and deals with problems in culturally specific ways. Infant feeding practices are indeed contentious issues. The findings of my study suggest that infant feeding is a "moral minefield". Infant feeding decisions are not only about nutrition, but more importantly, are about morality. The discourse on breastfeeding amongst the Thai women in my study relates to ideals of motherhood. Most often, women refer breast milk to "mother's milk" (nom mae). This emphasises the mother and child relationship ideal. The belief that it is a mother's blood that creates her breast milk and the characteristics of a mother is transferred to her child through breast milk reinforces the interconnection between a mother and her child (Liamputtong, 2007). Both breast and bottle-feeding mothers in my study see themselves as "knowledgeable rather than ignorant". Most also believed that breastfeeding is something a 'good mother' should do. However, regardless of their feeding choices, the actual practice of breastfeeding amongst these women was socially constrained. Mothers who bottle-feed attempt to show that their decisions to bottle-feed is "perfectly justified" (Murphy, 1999: 205). I contend that the campaign 'Breast is best' is not only a choice over whether women should breastfeed or not, but also gender identity performance. In the case of my study, it is the gender identity of women as mothers. We must also be mindful that women do not necessarily lack knowledge to make decisions about infant feeding, but that there are other important things at play. In my study, there are other significant factors including work and insufficient milk that dictate whether women choose to breast or bottle-feed their infants.

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## **Catherine Lucas: Advice on iodine and nutritional requirements during pregnancy: Knowledge and practices of women and their healthcare providers in Antenatal Shared Care.**

*Karen Charlton, Catherine Lucas, Lucy Brown, Erin Brock & Leanne Cummins. School of Medicine, University of Wollongong and Antenatal Shared Care Co-ordinator, Illawarra Shoalhaven Local Health District.*

**Aim:** To assess nutrition related knowledge and practices, with a particular focus on iodine and supplement use, of both pregnant women and healthcare providers that participate in Antenatal Shared Care (ANSC) in a regional area of New South Wales. **Background:** In Australia, pregnant women are especially at risk of consuming inadequate amounts of the trace mineral iodine, which can lead to mild to severe reductions of intellect in childhood, mental impairment and cretinism, and miscarriage or stillbirths depending on the severity of the deficiency [1]. To prevent iodine deficiency in pregnant and breastfeeding women, the National Health and Medical Research Council (NHMRC) recommends that these groups take supplements containing 150µg of iodine [2]. ANSC is a relatively new model of care whereby women are cared for by both their general practitioner (GP) and an obstetrician at a public antenatal clinic. The defined clinical pathway for ANSC states that information on supplementation should be provided by the GP [3], however compliance with this,

along with GP's knowledge of iodine and supplementation has not previously been investigated. **Methods:** Pregnant women enrolled in ANSC completed a pre-tested knowledge and practices survey and a validated iodine specific food frequency questionnaire (FFQ)[4] (n=142). GP's and nurses participating in ANSC completed a short survey which assessed their knowledge about iodine and supplementation (n=61). **Results/Findings:** Both groups had poor knowledge about the importance and roles of iodine during pregnancy. Only 36% of women reported receiving adequate information about iodine, compared to 80% for iron and 77% for folic acid. Correspondingly, 6% of GP's reported their patients were knowledgeable about iodine; compared to 62% and 80% for iron and folic acid, respectively. Most women (82%) reported taking a supplement during their current pregnancy, and 70% were taking a supplement containing iodine. Only 26% of GP's reported discussing iodine supplements with their pregnant patients and 70% did not know the NHMRC recommended dosage of iodine for pregnancy supplements. The mean  $\pm$  SD iodine intake of pregnant women was  $205 \pm 114 \mu\text{g}/\text{day}$ , which meets the Estimated Average Requirement (EAR) ( $160 \mu\text{g}/\text{day}$ ) for pregnant women [5]. Half (52%) of women's dietary iodine was provided by dairy foods, and 7% came from fish and seafood, despite being an excellent source of iodine. Women consuming 2 or more serves of bread per day were more likely to meet the EAR for iodine from diet alone, as were women who reported using iodised salt. The mean  $\pm$  SD iodine intake including iodine from supplements was  $368 \pm 168 \mu\text{g}/\text{day}$  (Range: 15-863  $\mu\text{g}/\text{day}$ ) and no participants reached the Upper Limit of  $1100 \mu\text{g}/\text{day}$ [5]. Most healthcare providers (74%) expressed interest in receiving ongoing professional education about iodine in pregnancy. **Conclusion:** Both GP's and pregnant women in ANSC exhibited poor knowledge about iodine. There is a clear lack of information about iodine being provided to pregnant women compared to other key nutrition topics in pregnancy. Implications for policy, practice and education: Further nutrition education for ANSC health practitioners is required to ensure that patients receive sufficient dietary advice for optimal pregnancy outcomes.

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## **Julie McGuire & Libby Salmon: Breastfeeding at the Australian National University: does proximity of childcare services improve nutrition and nurturing?**

*McGuire, J., Smith, J., & Salmon, L. Faculty of Health, Queensland University of Technology, and Australian Centre for Economic Research on Health, Australian National University.*

**Aims:** To investigate how childcare services at the Australian National University (ANU) facilitate or impede breastfeeding. Background Mothers have cited proximity between childcare and the workplace as facilitating breastfeeding in two Australian studies of women returning to work (1, 2). A study of breastfeeding in ANU childcare services provided an opportunity to examine whether mothers valued proximity to maintain contact with their child as well as optimal nutrition. **Methods:** Data was from ANU workplaces and childcare services participating in voluntary surveys conducted from 28 March to 29 April 2013. Quantitative and qualitative data was collected through online surveys of childcare service directors and mothers using ANU childcare services. Sociodemographics of the mothers, and breastfeeding support policies and practices were summarised, and compared with data from a previous nationwide study of 178 childcare services and 89 mothers who used these services (1). Quantitative data was compared using Chi square tests. Qualitative responses regarding barriers to breastfeeding were categorised and compared with responses in the national surveys. **Results/Findings:** There were 30 childcare mother responses and 4 childcare director responses. On average ANU childcare mothers were aged 36 years, and 53% had family incomes of \$114,000 or more per year. 97% had post-secondary education and 57% had postgraduate degrees.

Income and education levels were significantly higher ( $p < 0.05$ ) for ANU childcare mothers than mothers in the nationwide study. Childcare services at the ANU reported providing breastfeeding support such as facilities to breastfeed, express and store milk, but inconsistent provision of tangible support and knowledge of breastfeeding information and discrimination legislation. This was not significantly different from support provided in the nationwide study. Breastfeeding prevalence at ANU childcare services was significantly higher ( $p < 0.005$ ) than in the nationwide childcare services for children aged 6-12 months (41% vs 14%) and 13-24 months (16% vs 5%) respectively. In the ANU study most children (80%) were fed either breastmilk or breastmilk and solid food at the age that they started attending childcare (mean 13.5 months, std dev 8.9 months). A quarter of mothers reduced or stopped breastfeeding before their child started attending childcare. The average age when any breastmilk feeding ceased was 16.6 months (std dev 5.6 months). Some mothers commented that proximity and breastfeeding at childcare was an opportunity to bond with or calm their child, while others stated that this added contact unsettled their child. **Conclusion:** Despite the advantages of mothers using ANU childcare and high breastfeeding rates, the study emphasised the social and childcare factors needed to support the breastfeeding dyad when women return to work.

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### **Isis McKay: From little things... big things grow; a global community development initiative promoting peer support for breastfeeding.**

*Women's Health Action Trust – New Zealand.*

Increasing the rates and duration of breastfeeding has consistently been demonstrated to be an effective intervention for improving community health. Research highlights that a significant barrier to breastfeeding is the lack of peer support for breastfeeding women. Women with no prior exposure to breastfeeding in their family or social network, who feel that their choice to breastfeed makes them different to other women in their social circle, are more likely to prematurely cease breastfeeding. In August every year, to raise awareness of the benefits of breastfeeding and the need for national and global support, the World Alliance for Breastfeeding Action organises World Breastfeeding Week. To mark this occasion Women's Health Action coordinates the Big Latch On. Founded by Women's Health Action in 2005 the Big Latch On is a highly successful, targeted community development initiative that raises awareness of the benefits of breastfeeding, encourages the formation of support networks between breastfeeding women, and aims to normalize breastfeeding as a part of daily life. There has been a substantial growth in the numbers of breastfeeding women attending and in the support for breastfeeding from whānau, peers and the community. The Big Latch On is now a worldwide event, aiming to strengthen support for breastfeeding to improve the health of women and children around the world. The Big Latch On is informed by the principles of community development, providing the opportunity for breastfeeding women to get together in their local communities, coordinate their own events, raise awareness about the benefits of breastfeeding, and identify opportunities for on-going support. This presentation will discuss key evaluation findings from the 2013 Big Latch On and discuss how the Big Latch On supports communities to identify and grow opportunities to provide on-going breastfeeding support and promotion. This presentation will also explore opportunities for replicating this model for health promotion and public health interventions for a range of health issues.

### **Rachelle McMahan: The impact of a single family room neonatal nursery on early and longer term parenting behaviour and psychological functioning within an Australian context.**

*Rachelle McMahan & Assoc. Prof Liz Jones. School of Applied Psychology, Griffith University.*

**Aim:** The aim of this study is to compare the outcomes for parents of infants cared for in the single family room (SFR) nursery with the shared ward nursery within an Australian setting. We compare the frequency and duration of parental presence throughout the infant's stay in hospital, breastfeeding rates, sources of stress and maternal psychological illness both at discharge and at 4 months post-discharge. **Background:** In late 2013, the single family rooms in the newborn care unit at the Gold Coast University Hospital became one of the first of their kind in Australia, (Shahheidari & Homer, 2012). SFRs have been implemented in more than 5 countries internationally and are fast becoming the gold standard in neonatal care unit design (National Guideline). Previous research has identified that mothers of infants in the SFR nursery are significantly more likely to breastfeed their infants (Domanico, Davis, Coleman, & Davis) and visited their infants for significantly more hours over the first four weeks of their infants life than parents of infants in the shared ward nursery (Pineda et al., 2012). However, this sample also objectively recorded significantly higher stress scores at discharge (Pineda et al., 2012). **Methods:** Quantitative data were collected from 31 mothers in the shared ward nursery and 30 mothers in the SFR nursery at the infant's discharge from hospital at again at 4 months post-discharge. Data collection began in September 2012 and is due for completion in the SFR design in June 2014. **Results/ Findings:** T-tests and chi square analyses will be conducted comparing mothers from the shared ward nursery and the SFR nursery. **Conclusion and implications for policy, practice and education:** This study is the first to document the impact of the SFR on parental factors both at discharge and 4 months in an Australian setting. The findings have implications for nursing practice in Australian and International SFR neonatal nurseries to support mothers of preterm/LBW infants.

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## **Alexandra McManus: Fish, Seafood and Omega-3 Fatty Acids in Maternal and Infant Nutrition.**

*Professor Alexandra McManus (presenting author) & Dr Wendy Hunt. Centre of Excellence for Science, Seafood and Health, Curtin University.*

**Aim:** This review will highlight the need for public health messages to convey the importance of long-chain omega-3 polyunsaturated fatty acids to maternal and infant health. The many health benefits of the consumption of long-chain omega-3 polyunsaturated fatty acids, fish and seafood to maternal and child health will be presented. **Background:** Maternal consumption of marine sourced long-chain omega-3 polyunsaturated fatty acids has implications for maternal health, foetal brain development and many infant birth outcomes. Further it is that that 65.5% of the global burden of disease from postpartum depression is potentially linked to long-chain omega-3 polyunsaturated fatty acid deficiency (Hibbeln et al. 2007). The message of omega-3 fatty acids and health benefits is complex. Not all omega-3 fatty acids are equally efficacious and the majority of research citing health benefits associated with omega-3 status relate to marine sourced long-chain omega-3 polyunsaturated fatty acids (Hunt and McManus 2013). As no nutrient works in isolation it needs to be articulated that fish and seafood offer many highly bioavailable macro- and micro- nutrients in addition to their long-chain omega-3 polyunsaturated fatty acid content. **Results / Findings:** Despite the importance of omega-3 fatty acid consumption to both maternal and infant health including foetal neurological development, it is clear that although pregnant women actively seek information about nutritional changes, health-care services have not been providing adequate information about the importance of consuming omega-3 fatty acids during pregnancy [Sinikovic et al. 2008]. To further complicate health messages for omega-3 fatty acid consumption and pregnant women in particular, is concern about methylmercury contamination associated with consumption of certain types of fish

(Strom et al. 2011). It is important that communications are clear about choice of fish species: methylmercury is bioaccumulative and therefore concentrations are higher in fish at the top of the food chain such as shark and swordfish. The benefits to maternal and child health identified from consumption of 340g or more of fish a week are such that advice to limit seafood consumption based concerns regarding traces of contaminants may in fact be detrimental (Hibbeln et al. 2007).

**Conclusion:** The message of health benefits associated with adequate consumption of fish, seafood and marine-sourced omega-3 fatty acids is complex, especially for pregnant women. The long lasting benefits to both maternal and child health are such that it is imperative that women receive balanced communications at this time when they are actively seeking nutritional information.

**Implications for Policy, Practice and Education:** It is imperative that education about fish, seafood and long-chain omega-3 polyunsaturated fatty acid consumption be provided to pregnant women to promote optimal consumption and maternal and child health.

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## **Shahla Meedy: An innovative, inexpensive program that was effective in prolonging breastfeeding to six months: Theory and Evidence Based Intervention.**

*Shahla Meedy & Professor Kathleen Fahy. Southern Cross University and University of Wollongong, New South Wales*

**Aim:** To evaluate the effectiveness of a theory and evidence based intervention called the "Milky Way" to increase breastfeeding rates until six months postpartum. **Background:** Health professionals including midwives encourage women to breastfeed; however, many women stop breastfeeding in the first few weeks after birth with a diminished sense of self. Evidence demonstrated that some professional interventions specifically antenatal educations are more focus on convincing women to breastfeed but less on exploring women's feeling and expectation on their mother infant relationship (1). In consistence with this, a literature review has identified women's breastfeeding intention, social support and confidence as the three major modifiable factors that can affect breastfeeding duration (2). Previous educational and/or support interventions have not been consistently successful in increasing breastfeeding rates at six months (3-5) and there is no intervention where these three modifiable factors have been addressed simultaneously. **Method:** A quasi-experimental design, involving 420 women: 205 in the standard care group and 215 in the intervention group. Women were surveyed in the antenatal period about baseline demographic data. Postnatal data were collected by telephone interviews at one, four and six months postpartum. The intervention design was based on two theories and the current evidence. "Birth Territory and Midwifery Guardianship" and "Self-efficacy" theories were the foundation of the intervention. The program had three antenatal breastfeeding classes and two postnatal follow up phone calls. **Key Findings:** Analysis was based on intention to treat. Compared to standard care, women in the Milky Way group had higher rates of breastfeeding at six months (54.3% vs. 31.4%  $p < .001$ ). There were no significant differences in the antenatal baseline data between the groups. After adjusting for confounders including age, education, smoking and intention, engagement in the Milky Way program increased the likelihood of any breastfeeding by three times at six months (OR= 3.01, CI 1.86-4.86). Perceived low milk supply at the time of breastfeeding cessation was very low among women in the Milky Way group (10%) compared with the standard care group (60%)(6). **Discussion & Conclusion:** Success of the Milky Way intervention can be attributed to its theoretical framework and its structure aiming to increase the three major modifiable factors. Firstly, women were encouraged to trust themselves, use their inner power to make decision and develop a positive bonding with their babies. Secondly, many pictures, hand on activities and roleplaying were used to

increase women's confidence. Thirdly, women were invited to bring their own support people to the antenatal classes and build a supportive network of family and friends. The Milky Way program is a successful and feasible intervention, which can be delivered by midwives and other health professionals as part of standard maternity care. **Implications for policy, practice and education:** The Milky Way program can be used in policies and best practice recommendation to support breastfeeding practice at local, area health district and national and international levels with a minimum financial burden. The Milky Way program can be incorporated into Baby Friendly Hospitals and structured continuity of care models to provide extra support. Finally, the Milky Way program can be incorporated in the individual or organisational educational programs to support breastfeeding women.

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### **Victoria Monks: Supporting breastfeeding in Liverpool's hard-to-reach groups.**

*Victoria Monks, Dr Kate M. Bennett & Professor Jason Halford. University of Liverpool and Liverpool Clinical Commissioning Group.*

**Background:** Liverpool, in North-West England, has one of the lowest breastfeeding rates in the UK; initiation rates are 23% lower than the national average and only 26.2% of mothers continue any breastfeed until 6-8 weeks. Many efforts have been made to increase Liverpool's breastfeeding rates: a peer support scheme has been established; promotions have been developed; and many institutes have been awarded or are working towards achieving UNICEF Baby Friendly Initiative status. However, rates have failed to reach the annual target of a 2% increase in initiation rates, which was set by the NHS Planning and Priorities Framework (Department of Health, 2002). The framework specifically recommended focussing on women from disadvantaged backgrounds, who are not only harder to reach with health promotions and care, but are also subject to variety of health inequalities. Research has identified that the area in which a mother lives plays a large role in her infant feeding decisions, due to the impact of social and cultural norms and local experiences. To raise the breastfeeding rates in Liverpool it is, therefore, important to understand the specific barriers to breastfeeding that mothers in the area face to ensure that breastfeeding information, promotion and support is adequate to their needs (Dyson & Flacking, 2010). **Aim:** The study aimed to gain an understanding of infant feeding attitudes and practices in Liverpool from the perspective of health professionals and peer-supporters. Three specific objectives were determined: 1). To identify which women were the hardest-to-reach with breastfeeding information and support; 2). To gain insight into the main barriers to breastfeeding these women face; 3). To explore the current support and how this may be improved. **Methods:** Semi-structured individual interviews were conducted with a range of health professionals and peer supporters (N=32). Interview data were analysed using a modified grounded theory approach (Bennett & Vidal-Hall, 2000). **Results:** Findings provide valuable data on the experiences of health professionals and peer supporters who provide breastfeeding promotion and support in a bottle-feeding culture. 1). A range of hard-to-reach groups were identified, including teenage mothers, mothers living in areas of high deprivation, and mothers of ethnic minority backgrounds. 2). Commonly cited barriers to breastfeeding faced by these mothers included: social and cultural norms; education; normalisation of formula feeding; familial support; sexualisation of the breast; and breastfeeding in public. 3). The majority of health professionals believed adequate support was available for breastfeeding mothers. However, they reported a lack of uptake to the support of available, specifically from mothers in hard-to-reach groups. Education was a recurring theme, with most health professionals citing the lack of education regarding

breastfeeding prior to pregnancy or birth as a major barrier to breastfeeding. **Conclusion:** Liverpool has a high concentration of 'hard-to-reach' groups, as identified by this research. Despite breastfeeding information and support being widely available, it is not effectively being utilised by these groups. Recommendations relating to the targeted promoting and supporting breastfeeding within these groups will be highlighted within the presentation. Lessons learned from this research will be translatable to other areas and parts of the world.

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### **Kate Mortensen: An international survey of peer supporter training for breastfeeding.**

*Kate Mortensen (presenting author) & Associate Professor Kath Ryan. School of Nursing & Midwifery, La Trobe University Melbourne, Australia.*

**Background:** Peer support is recognised as an important factor in improving breastfeeding exclusivity and duration (Chung 2008, Shealy 2005 & Sikorski 2003, Renfrew 2012). The Australian National Breastfeeding Strategy 2010-2015 (2009) recognised that "very few breastfeeding activities and programmes are formally evaluated" (pg 30) and called for a national approach to monitoring and co-ordinating research that will inform the development of appropriate interventions. Peer supporter training, however, ranges from a few hours "chat" at the local level to a self-accredited international peer counsellor training programme with hours of study, assessment and formal qualification. We need to map what is currently happening in breastfeeding peer supporter training both nationally and internationally. Then, we need to evaluate the various programmes and their suitability for various communities. **Aim:** To investigate training of peer supporters for breastfeeding internationally and nationally including programmes, methods, nature of support given, programme evaluation and accreditation, and peer supporter career prospects? **Methods:** This innovative qualitative research project was an international scoping exercise that involved mapping the current situation in developed countries and some developing countries with regard to training for breastfeeding peer supporters. It included electronic interviews and a snowball survey, documentation of current programmes and their outreach, their funding, and comparison of their contents. It also documented the known career prospects for trained peer supporters. **Findings:** Responses were obtained from Australia, New Zealand, the UK, the USA, Singapore, Malaysia and a few developing countries. This presentation will focus on some of the key findings of the survey and the subsequently developed typology of peer supporter training. The impact of training on the peer supporter subsequent career prospects is important and well known but not often documented. **Conclusion:** This presentation will promote discussion of the training of peer supporters and the evaluation of current training programmes. The career impact for peer supporters will also be discussed.

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### **Judith Myers: Breastfeeding issues for Aboriginal families in Victoria.**

*Judith Myers, Jennifer Browne, Sharon Thorpe, Kay Gibbons & Stephanie Brown. Murdoch Children's Research Institute and Royal Children's Hospital, Australia and the Victorian Aboriginal Community Controlled Health Organisation, Australia.*

Historically, breastfeeding was almost universal among Australian Aboriginal women (Gracey 2000). Now lower rates of breastfeeding among Aboriginal children are observed, particularly after the first month of life (AIHW 2011). Support of family members, peers and informed professionals is one factor promoting successful breastfeeding experiences for mothers and infants (Britton 2007). We undertook a qualitative needs assessment involving consultation with Aboriginal parents of young children and early childhood practitioners from Aboriginal health and early childhood services in Victoria, Australia. The aim was to investigate breastfeeding concerns of families with young children attending Aboriginal health and early childhood services in Victoria; training needs of early childhood practitioners; and sources of breastfeeding advice for families with young children. Thirty-five parents participated in 2 men's and 2 women's focus groups in one regional and one urban area of Victoria. Forty-five health and children's services practitioners from 14 sites participated in interviews. We identified concerns, difficulties, and barriers to breastfeeding in Victorian Aboriginal communities. Shame, embarrassment (particularly among younger mothers), lack of modeling and inconsistent support from staff were described. Women, men and practitioners alike expressed their concerns about infant feeding, extending beyond the role of breastfeeding solely as a source of infant nutrition. Feedback from men confirmed that fathers want to participate more in child rearing and supporting breastfeeding, but traditionally have not had a role in breastfeeding as it was perceived as 'women's business' (Eades 2004). Women requested more support from men, but believed broader societal views of breasts as 'sexual' prevented men from getting involved. Closing the gap in breastfeeding initiation and continuation rates among Aboriginal mothers and infants is a local and national priority (NHMRC 2012) (Amir 2010). The context of future strategies to address this gap is important to progress these issues within Aboriginal communities. Framing discussions about breastfeeding as 'good for baby's nutrition' may be more culturally appropriate for communities to discuss (and support), than discussions about 'breasts'. Similarly targeted child nutrition and capacity building opportunities for health workers working with Aboriginal families are required. These approaches may facilitate a shift in thinking towards the view that breastfeeding is good for baby's health, which is everyone's 'business'.

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## **Ruth Newby: How do first time mothers use the internet in seeking infant feeding information?**

*Ruth Newby, Wendy Brodribb, Robert S Ware & Peter S.W. Davies. Children's Nutrition Research Centre; Division of General Practice, School of Medicine; School of Population Health; Queensland Children's Medical Research Institute, The University of Queensland, Herston, Australia.*

Women's knowledge of and adherence to dietary recommendations for early infancy has many benefits to individuals and to society. In Australia, however, many infants receive less than the recommended duration of exclusive and of any breastfeeding and are introduced to non-milk foods earlier than recommended. There is an increasing shift in community behaviour from being passive recipients to active consumers of health information, with the internet becoming a primary tool for health information seeking. This shift may be occurring among first time mothers seeking information regarding infant feeding during pregnancy and through their infants' first year. We aimed to report the extent to which first-time mothers use the internet for infant feeding information and support, to evaluate self-reported success in this search and to describe associated

breast and formula feeding patterns. Data collection was part of the Feeding Queensland Babies Study- a prospective questionnaire-based longitudinal study of infant feeding attitudes and behaviours amongst first-time mothers in Queensland. Data for this analysis was collected by maternal report when the children were six months of age, between December 2010 and August 2011. We investigated four topic areas of infant feeding- breastfeeding, formula feeding, and the timing and selection of first non-milk foods. We evaluated the efficacy of the Internet as a source of information and support for breastfeeding by asking mothers whether they had ever used the internet to get help with breastfeeding or had ever used online chatrooms or forums to get help with breastfeeding. The internet was used by 81% of women in sourcing information on infant feeding during their infants' first six months, while 96% gained information from health care providers across all topics. Up to 64% made use of general internet searches, with only 19% accessing online chat-rooms/forums. Information on breastfeeding and first non-milk foods was accessed by more than half of the mothers in this sample using general internet searches, while less than a third accessed infant formula information online. Mothers who sought breastfeeding assistance on the internet during their infants' first six months but did not find it helpful had 0.3 times the odds of giving their infant breast milk at age 6 months (CI=0.1–0.5,  $p<0.001$ ) and 3.3 times the odds of giving them formula (CI=1.7–6.5,  $p=0.001$ ) compared with those who were able to find the help they needed, after adjustment for maternal age and socioeconomic status. Maternal self-reported success in the use of chatrooms for breastfeeding support was not found to be significantly associated with infant feeding pattern. First-time mothers in this study actively sought health information regarding infant feeding. Online breastfeeding interventions have the potential to improve breastfeeding rates; however ongoing research into their effectiveness in comparison with other interventions is crucial. Health care providers are well placed to support online infant feeding information seeking endeavours. They can integrate information gathered from many sources, facilitate access to evidence-based recommendations and modify attitudes arising from encountered information and misinformation.

### **Hannah Olley & Jhansy Reji: Well breastfeeding of course... “: Infant feeding decisions and practices amongst recently-arrived Indian women living in Australia.**

*Hannah Olley, Jhansy Reji, Prof Virginia Schmied, Dr Elaine Burns, Dr Margie Duff, Prof Hannah Dahlen, School of Nursing and Midwifery, University of Western Sydney.*

**Aim:** The purpose of this study was to explore the perceptions and experiences of breastfeeding held by Indian women who have migrated to Australia within the last five years. **Background:** Studies report mixed findings about rates of both exclusive and partial breastfeeding amongst women who are migrants in high income countries (1). This reflects levels of acculturation among new migrants and many studies demonstrate that over time breastfeeding rates begin to mirror the rates of the host-country's population (2). India is the top source country of migrants to Australia, accounting for 13% of recent arrivals and many will become first-time parents within the first five years of resettlement. This migrant group is known to have a high breastfeeding initiation rate however, cultural beliefs, family influence may delay the initiation of breastfeeding or alternatively influence the introduction of formula or other fluids (3). **Methods:** This study is a descriptive qualitative study comprising of face-to-face interviews which were conducted with 11 women who had migrated to Australia since 2008, and their partner and mother/mother-in-law if available, between July and December 2013. Eight were first-time mothers and infants ranged in age from 2 weeks to 7 months at the interview Interviews were conducted in English or in the participant's first language when preferred, with the assistance of a bi-cultural researcher. Interviews were transcribed and thematically analysed. **Results/Findings:** A number of key themes were derived from the data including: 'Breastfeeding of course...'; "Formula as well if it is best"; "Advice: the local and the transnational". All participants had decided to breastfeed prior to giving birth as it was seen as "normal" but the majority had not undertaken any preparation for breastfeeding. Despite this, women indicated that the introduction of formula at the advice of others (health professionals and or family) was not a source of tension for them as they wanted to do 'what was best for their baby'

and the majority of women continued to breastfeed once formula feeding was introduced. Participants sought advice about breastfeeding from family and health professionals, resulting in a combination of traditional and western practices for solving breastfeeding problems, such as decreased milk supply. Some participants actively sought out information, despite breastfeeding being seen as a 'private' experience in India. Although breastfeeding was seen as a 'sacred', 'private' experience in India, in Australia most stated they would breastfeed in public but only if covered by a shawl or they had access to a private space. Finally, whilst most participants believed they were going to breastfeed for a minimum of one year, some were uncertain if they would achieve this because of the need to return to work, the belief and the difficulties they experienced in the establishing breastfeeding. **Conclusion:** Indian migrant women seek to combine traditional and contemporary practices in India with information from family and health professionals in Australia. Notably this study revealed that some of the experiences of Indian migrants in Australia resonate with Australian-born women. The lack of appropriate support from health professionals and lack of access to an informal social network are key issues that need to be addressed.

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### **Shanti Raman: “Nothing special, everything is ordinary... maamuli”: Socio-cultural practices and beliefs influencing the perinatal period in urban India.**

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**Background and aims:** Globally, India contributes the largest share in terms of sheer numbers to the burden of maternal and infant under-nutrition, morbidity and mortality. A major gap in our knowledge is how socio-cultural practices and beliefs influence the perinatal period and thus perinatal outcomes. Our aims were to explore the territory of cultural and traditional practices and beliefs influencing women and their families throughout the perinatal continuum i.e. pregnancy, childbirth and early infancy, in urban India. **Methods:** Using an ethnographic approach incorporating observations of family life and clinic encounters, and in-depth interviews with 36 mothers from different socio-cultural and socio-economic backgrounds who had given birth within the past two years in a tertiary hospital in Bangalore, south India, we explored the role cultural ideas and beliefs play in influencing the perinatal period in the urban setting. **Findings:** We found that while there were some similarities in cultural practices to those described before in studies from low resource village settings, there are changing practices and ideas. We found that fertility concerns dominate women's experience of married life; that notions of gender preference and ideal family size are changing rapidly in response to the urban context; that while a rich repertoire of cultural practices persists throughout the perinatal continuum their existence is normalised and even underplayed. In terms of diet and nutrition, traditional messages including notions of 'hot' and 'cold' foods, are stronger than health messages; however breastfeeding is the cultural norm and the practice of delayed breastfeeding appears to be disappearing in this urban setting. Complementary feeding of infants mostly consists of traditional, locally available millets and grains, with little use of packaged infant foods. Marriage, pregnancy and childbirth are so much part of the norm for women, that there is little expectation of individual choice in any of these major life events. **Conclusions and implications:** Clinicians and policy makers need to have a greater understanding of the dynamic factors influencing and shaping the perinatal period in contemporary India, given the large and ever growing diaspora from the sub-continent in Australia. This includes an acknowledgment of the

health promoting as well as potentially harmful practices and beliefs; and the powerful role the extended family plays. This will allow for better planning and targeting of culturally appropriate interventions through the perinatal continuum.

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## **Judith Reid: ‘Nurturing the Novice Mother’: A grounded theory of ‘support’ and its impact on building confidence with breastfeeding and parenting for first-time mothers.**

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**Aim:** The purpose of this research was to consider the contemporary circumstances in which infant feeding choices and practices occur and the perspectives that first-time mothers have about what is supportive, specifically in relation to sustaining breastfeeding. **Background:** Breastfeeding confers many benefits for the health and wellbeing of mothers and babies and for the wider community. Yet, despite substantial research to try to determine the factors that affect breastfeeding duration; global initiatives and local and national policy directives; the universally endorsed aim of exclusive breastfeeding for 6 months remains an elusive aspiration for many women in Australia. **Methods:** Using a contemporary approach to grounded theory this research examined the perceptions of new mother’s interactions with ‘others’ within their support network. Fifteen first-time mothers were recruited within western Sydney, New South Wales, Australia. Each woman then invited those that she deemed would be significant in her early parenting to participate in ‘family conversations’ both antenatally and postnatally. A one-to-one interview with each mother conducted after each family conversation allowed for the women’s individual views and candid perspectives of the impact of family and friends on their preparatory and then actual experience of breastfeeding and associated decision-making to be ascertained and analysed. **Results:** The findings provide new understanding of the complexities involved in becoming a mother for the first time and highlight the significance of support networks in determining how women feel about their parenting and breastfeeding ability. The data analysis shows the strong relationship between women’s success with understanding and responding to their baby’s needs and learning how to breastfeed. In demonstrating how these factors operate together new insight and understanding into fostering the continuation of breastfeeding has been gained since those providing support can either promote or inhibit a woman’s development of confidence. **Conclusion and implications for policy, practice and education:** The theory of ‘Nurturing the Novice Mother’ confirms that women’s’ infant feeding decision-making cannot be separated from the totality of their mothering experience and needs and that self-efficacy and social support are modifiable factors that affect breastfeeding success. The grounded theory fills a gap in knowledge and understanding about social support and first-time mothering and outlines specific actions and behaviours by ‘others’ that can either assist women during the process of learning to be a mother or interfere with their learning. Providing nurturing support to novice mothers empowers them and helps move them to the position of seeing themselves as the ‘expert’ in regards to their own baby, which is important to assist them in reaching their goals for breastfeeding and vital to their self-identity as a mother.

## **Kath Ryan: ‘Back to normal’: Expressed breast milk (EBM) and disembodied motherhood: A critique of practices in contemporary breastfeeding culture.**

*Kath Ryan and Victoria Team, School of Nursing and Midwifery, La Trobe University.*

**Background:** The contemporary practice of breast milk expression is promoted as offering women more choice in infant feeding methods and the chance to get 'back to normal'. The concept of 'getting back to normal' and the consequences of trying to do this have not been explored. **Methods:** In 2005-6, forty-nine UK women from all walks of life were video interviewed about their experiences of breastfeeding. UK multi-region ethics committee approval was obtained for the project which was funded by Bournemouth University and undertaken in collaboration with the University of Oxford (Health Experiences Research Group) and overseen by an advisory panel of experts and consumers. The interviews were analysed using the constant comparative method and written up as summaries of topics of importance to the women. The findings were published on the award-winning website [www.healthtalkonline.org](http://www.healthtalkonline.org) in 2007 and are updated two yearly. Further thematic analysis of the data from 42 women in relation to breast milk expression revealed consequences that have not previously been thoroughly enunciated. **Findings:** With illustrative video clips from the women's narratives, we discuss the lifestyle reasons for expressing breast milk/feeding EBM, maternal emotional responses, gender roles, the vested interests of infant formula and breast pump manufacturers, employment legislation, and educational programmes that, we suggest, result in disembodied motherhood, fragmentation of the mother-infant dyad, contemporary changes in attitudes to breastfeeding, unsupportive breastfeeding environments and early cessation of breastfeeding. **Conclusions:** We conclude that while expressing breast milk temporarily relieves the mother of the necessity of feeding her infant and appears to offer advantages in terms of personal, social and study or work time it does nothing to address unrealistic expectations of motherhood, mother-baby separation and disruption of the mother-infant bond. Nor does it do anything to resist the attempts of social institutions to control male and female reproductive bodies. **Implications for policy, practice and education:** We suggest a more appropriate public discourse of 'developing a new normal' that could be adopted by mothers, fathers, families, advertisers, employers and policy makers.

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## **Athena Sheehan: Solutions for breastfeeding mothers': Cross-Disciplinary Perspectives on the Ideology Surrounding the Advertising of Breast Pumps.**

*Athena Sheehan (presenting author) & Wendy Bowcher.*

*School of Health, University of Technology, Sydney*

**Aim:** The purpose of this presentation is to present findings from a cross-disciplinary study that explored the ideology surrounding the use and advertising of breast pumps for new mothers.

**Background:** It is argued that breast expression is a usual adjunct to breastfeeding particularly when a woman returns to work, has a sick or premature infant, is separated from her infant, has breast pathology or maternal infections such as HIV (Binns et al, 2006). Increasingly women are also identifying they express so as others can feed their infant (Labinar-Wolfe, J., Fein, SB., Shealy, K.R. & Wang, C. 2008). Breast milk expression is increasing and is now considered a common practice (Geraghty et al 2012). Along with the increase in breastmilk expression, the use of breast pumps (particularly electric breast pumps) has increased. The electric breast pump appears to be the preferred method of breastmilk expression despite the recommendation that women be taught to hand express (Morton, 2013). **Methods:** Analytical tools from the field of social semiotic multimodal discourse analysis, were used to analyse advertisements for the use of breast pumps. Data comprised of breast pump advertisements taken from *Mother and Baby Magazines* during a 12 month period. **Findings:** The social semiotic multimodal analysis of the advertisements support findings into trends around the use of breast pumps, by shedding light on the way that mass media advertisements intersemiotically construct a specific view of the mother, the baby, breast milk, and

the use of breast pumps. **Conclusion:** This presentation is the first time a social semiotic multimodal analysis has been applied to advertisements about the use of breast pumps, and offers important insights into understanding the role of the mass-media in constructing ideologies surrounding key issues within the field of infant feeding and specifically, for understanding the different semiotic roles that visual and verbal matter play in constructing ideologies inherent in an advertisement for items such as breast pumps.

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### **Michelle Simmons: Inviting women to breakfast-getting them out from behind the curtains.**

*Michelle Simmons & Julie McKorkell. Blacktown/Mt Druitt Hospitals, Western Sydney Local Health District and Australian Breastfeeding Association.*

The postnatal unit at Blacktown Hospital is a 30 bed unit providing postnatal services for women from diverse cultural backgrounds. Traditionally breastfeeding support sessions within the unit were poorly attended. The women were not keen to leave their room to attend sessions facilitated by a midwife and an Australian Breastfeeding Association volunteer. After a review of the literature and reviewing models of care utilized within other maternity facilities, a decision was made to commence a "Buffet Breakfast" combined with information sessions on bathing, safe sleeping, and breastfeeding and expressing. This paper will explore strategies utilized within this model of care which have impacted positively on both women's attendance at breastfeeding support sessions and also the networking occurring between the women and the ABA volunteer. Women's, Midwives and ABA volunteer's satisfaction with the model of care will also be explored.

### **Julie Smith: Maternal time in interactive care of infants is higher for mothers who are breastfeeding.**

*Julie Smith, Robert Forrester & Mark Ellwood. Australian Centre for Economic Research on Health, College of Medicine, Biology and Environment, Australian National University, Canberra, Australia, Statistical Consulting Unit, Australian National University, Canberra, Australia and Pace Productivity, Toronto, Canada.*

**Introduction:** Breastfed infants are known to spend more time being fed, held or cuddled than infants who are not breastfed, but maternal time use has not yet been examined. **Aims:** We investigated if the time spent interacting with their infant through feeding and emotional care activities differed by the degree of breastfeeding, among mothers of infants aged 3-9 months. We also examined if there were differences between lactating and non lactating mothers. **Methods:** A nationwide sample of mothers (n=156) with infants aged 3, 6 or 9 months was recruited during 2005-2006 mainly via mothers groups, yielding 327 complete time use datasets for a 7 day period. Time use data was collected for the broad activity categories such as 'childcare' and for childcare sub-categories, such as breastfeeding or bottle-feeding ('milk feeding'), carrying, holding, soothing or hugging the infant ('emotional care') and interactive care such as 'feeding solids', 'playing and reading', or 'physical care' (e.g. dressing, bathing). Repeated-measures statistical analysis was used to compare maternal time use for infants aged 3, 6 and 9 months. Comparisons were between 6 feeding categories, after square root transformation of variables. **Results:** Differences between the 6 feeding groups were highly significant for weekly hours spent on both milk feeding, and emotional care. Mothers feeding formula and solids spent less time on emotional care than mothers who were breastfeeding only, or who were breastfeeding with solids. Lactating mothers spent more hours milk feeding and emotional care than non-lactating mothers; they also spent around 9 hours more on childcare. Maternal time in other interactive care (feeding solids, playing or reading, and physical

care) did not differ significantly, but average weekly employment hours were higher for non-lactating mothers. **Conclusion:** Time spent in feeding or emotional care interactions with infants differed significantly by infant feeding group. Results must be treated with caution due to possible selection bias.

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## **Jeni Stevens: Facilitating skin-to-skin contact immediately after caesarean section: The benefits and challenges of using ethnographic methods.**

*Jeni Stevens: Supervisors: Professor Hannah Dahlen, Professor Virginia Schmied & Dr Elaine Burns. School of Nursing and Midwifery, University of Western Sydney, Australia.*

**Aim:** The aim of this presentation is to reveal facilitators and barriers to implementing skin-to-skin contact (SSC) in the operating theatre following a caesarean section, and to discuss the value of ethnographic methods in investigating the implementation of SSC. **Background:** The World Health Organisation and UNICEF recommend that the mother and newborn should have SSC immediately after birth, including after a caesarean section if the mother is alert and responsive (World Health Organization and UNICEF, 2009). Skin-to-skin contact can be defined as placing a naked infant onto the bare chest of the mother and is recommended to continue for at least one hour for all women or until after the first breastfeed (UNICEF, 2011). Evidence demonstrates that SSC within one hour after a caesarean section may increase maternal and newborn emotional wellbeing, reduce maternal pain and anxiety, help provide maternal and newborn physiological stability and improve breastfeeding outcomes. It is important to identify barriers in providing SSC immediately after a caesarean section because hospitals generally do not provide this care. **Methods:** Phase One: A detailed literature search of 12 databases was conducted using the search terms skin-to-skin, kangaroo care and caesarean, to identify the known facilitators and barriers to the implementation of SSC within an hour of a caesarean section birth. Phase Two: Ethnographic methods (observations, video-recording, field notes and interviews) are being used to study the interactions between 30 mothers and their newborn infants for up to two hours after a having a caesarean section at one hospital site. Interviews are also being conducted with women at six weeks postpartum. In addition, a broad range of hospital staff are being interviewed regarding their perception of the facilitators and barriers of providing SSC in the operating theatre. **Findings to date:** Phase One: The key findings, in seven papers that met the inclusion criteria, indicate that consultation with a diverse range of hospital staff is needed to address safety concerns prior to implementation of SSC in the operating theatre. Education for staff, mothers and support people is also essential. Two papers discussed how they successfully implemented programs that aimed to improve SSC rates in the operating theatre. Crenshaw et al. (2012) employed a video ethnography PRECESS method and Hung and Berg (2011) utilised a PDSA model of improvement. Phase Two: From the outset, this ethnographic research project was beset with obstacles. It took six months to get final ethics approval because the ethics committee members did not understand that ethnography involved observation of current practice, not a change in practice. Obtaining access to the study site and explaining the study to the managers from different departments in the hospital was challenging. Once approved, it was time consuming to inform the vast numbers of staff members about the study, and recruiting women was also difficult because the hospital encouraged healthy women who were having repeat caesareans to birth at a different site. Despite these barriers, positive feedback for the study was received from hospital staff including managers. Data collection will be completed at the end of 2014. In this presentation findings related to the researcher's experience as an insider/outsider, how the research was adapted to accommodate participant needs, the benefits of gathering data using a video-recorder, and the diversity of responses from the participants will be discussed. **Conclusion:** Ethnography is a rigorous methodology for investigating the facilitators and barriers within a hospital context prior to

introducing a proposed practice change. This approach can enable the researcher to observe current practice and identify the organisational constraints and potential enablers for introducing skin to skin contact in the operating theatre.

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## **Jane Svensson: Breastfeeding and You: Strategies for Antenatal Breastfeeding Education.**

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**Aim:** The aims of the handbook second edition prepared from this project were: provide information and resources to antenatal educators and health professionals who inform and support women, their partners and family during the antenatal period; promote the use of educational resources that are based on recent biological and social research in breastfeeding and adult learning theory. **Background:** Breastfeeding is 'an unparalleled way of providing ideal food for the healthy growth and development of infants', as stated by the World Health Organisation, (1) and the Australian Government has confirmed its status through the release in 2009 of the Australian National Breastfeeding Strategy 2010-2015, (2) and in 2012 the NHMRC Infant Feeding Guidelines. (3) Recent Australian Institute of Health and Welfare figures indicate, however, that whilst the breastfeeding initiation rate is high at 96%, there is a rapid decline in the number of women breastfeeding by the time the infant is four weeks of age (61%), with then only 15% of infants being exclusively breastfed at around six months. Further it appears that the initiation and duration rates amongst indigenous women, (4) and those from some culturally and the linguistically diverse backgrounds are significantly lower. This project then to determine how midwives, antenatal educators and other professionals can more effectively prepare women and their partners for their breastfeeding experience providing the professionals with a resource for use in their practice. **Method:** The consultation for the development and production of the second edition of this handbook: firstly a comprehensive needs assessment conducted over 18 months in 1998/9 by this handbook author, as part of her doctoral studies, which involved expectant and new parents and health professionals from many disciplines; the extensive consultation for this second edition of the handbook, conducted over 3 months in 2013, involving: 23 expectant parents, both women and their partners; 46 new parents, predominantly women; 26 professionals from a range of disciplines. current academic breastfeeding, health education and adult learning literature; documentation, books, fact sheets and brochures and DVDs collected and reviewed recently from a multitude of sources, including the Australian Department of Health, BFHI, and UNICEF specifically for this second edition. **Results:** Similar to the results of the 1998/9 needs assessment, women and partners continue to struggle in the early weeks with their baby, but now they are able to clearly articulate a need for information on infant behaviour and in particular that of infant sleep. It is now the responsibility of the professional to provide this and expand current practice. Implications for Practice From their content suggestions it becomes apparent that women and their partners certainly view, and would have benefit from education that goes beyond the physicality of breastfeeding and although research rarely lists content, it certainly supports this. The majority of Maternity Hospitals in Australia have essentially two separate entities providing antenatal breastfeeding education, the antenatal educators and the IBCLC<sup>®</sup>s., a question now is, should this remain, and what about peer-led sessions or peers coming to sessions?

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Australian National Breastfeeding Strategy 2010-2015. 2009, Australian Government Department of Health and Ageing: Canberra. 3. NHMRC, Infant Feeding Guidelines. 2012, National Health and Medical Research Council: Canberra. 4. Australian Health Ministers' Advisory Council, Aboriginal and Torres Strait Islander Health Performance Framework Report 2010. 2011, AHMAC: Canberra.

## **Vivien Swanson: Young people's attitudes to infant Feeding and early parenting: A cross-cultural study.**

*Dr Vivien Swanson, Dr Leena Hannula, Dr Joan Strutton & Ms Linda Eriksson. University of Stirling, Stirling, Scotland, Metropolia University of Applied Sciences, Helsinki, Finland, Texas A&M University-Central Texas, USA.*

**Background/Aims:** Parents' decision to breastfeed their infant is not taken in isolation, but in the context of socio-cultural parenting beliefs and practices. Despite international investment in promotion of breastfeeding, there is considerable variance in the numbers of parents who chose to initiate breastfeeding, and many countries have less than ideal rates, for example, 74% in Scotland (1), and the USA<sup>2</sup>, compared with 95-98% in northern European countries (2). There are many possible socio-cultural influences, including attitudes, values and social norms, breastfeeding healthcare practices and policies, which might affect this variation (3). Young people's views are important, since beliefs are formed early on, reflecting family and peer experiences. This study investigated young people's (non-parents) attitudes towards infant feeding in the context of their views on the caring role of both parents of newborn infants, comparing cultural norms and beliefs in countries with high (Sweden, Finland, Norway) and lower (Scotland, USA) breastfeeding initiation rates. The aims were to compare parenting attitudes, norms and intentions, and infant feeding attitudes norms and intentions for young people in Scotland with those in other countries, to identify salient beliefs which might predict future breastfeeding behaviour. **Methods:** This was a cross-cultural observational study using a questionnaire survey (on-line or paper based) of 584 young people (male and female) aged 14-18 from Scotland, Sweden and the USA, based on a motivational model, Ajzen's Theory of Planned Behaviour (TPB) which has good validity as a predictor of breastfeeding (3). Data currently being collected from Finland and Norway will also be included in the final report. The main outcome variable was infant feeding intention. Predictors were knowledge, attitudes, social norms, and confidence in relation to infant feeding (breastfeeding/formula feeding), and shared parenting beliefs, early parenting attitudes and confidence. **Results:** We found a consistent and statistically significant gradient of differences in motivational factors between the countries studied, reflecting infant feeding initiation rates. Young people in Scotland showed poorer knowledge, less positive attitudes, and lower breastfeeding norms than those in the USA (all  $p < 0.001$ ), who in turn showed lower (less positive) scores than young people in Sweden (all  $p < 0.001$ ). More positive breastfeeding knowledge, beliefs, and norms were positively correlated with shared parenting expectations and confidence, but with a more complex pattern of cross-cultural differences. Young men's and young women's attitudes to parenting showed more similarities than differences. **Conclusions and implications for practice:** This study provides important information for health educators wishing to promote breastfeeding, and highlights the importance of considering both young men's and women's views about future parenting roles. Cultural differences in predictors of intentions to breastfeed identified in this research could provide a basis for targeting behavioural interventions to promote breastfeeding in young parents.

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## **Sarah Taki: Parent and child effects on overweight and obesity in infants and young children from low socioeconomic and indigenous families: systematic review with narrative synthesis.**

*Taki, S., Russell C.G., Laws R., Campbell K.J., Elliott, R., & Denney-Wilson E. Faculty of Health, University of Technology, Sydney, and the Centre for Physical Activity and Nutrition Research, Deakin University.*

**Background:** The establishment of effective programs to promote healthy weight gain in infancy and early childhood is a public health priority given the elevated rates of overweight and obesity in high-income countries [1, 2]. Parent-child interactions, children's eating and physical activity and sedentary behaviours are central influences on weight gain in families. Eating and activity habits and preferences are learned in infancy and childhood [3, 4], and from there track into adolescence and adulthood [5-7] with attendant effects on weight throughout the lifespan. The objective of this review is to systematically review the evidence on the effects of parents and families on children's weight status in socio-economically disadvantaged families and Indigenous families. **Methods:** We conducted a systematic review of the literature that investigated causes of weight gain in children aged 0-5 years from socioeconomically disadvantaged or indigenous families. Major electronic databases were searched from inception until November 2013 using specified key words to identify studies addressing relationships between parenting, child eating, child physical activity or sedentary behaviour and child weight. Studies of any design were included. **Results:** Studies of any design were included. A total of 28 articles met the inclusion criteria. The MMAT quality rating for the studies ranged from 25% to 100%; with the majority rated 75% (n= 13). The majority of evidence was cross-sectional, relied up on self-report instruments and was focused on ethnic minority groups in the USA. Results of each relationship analysed were modest and mixed. Clustering of diet, weight and feeding behaviours by socioeconomic indicators and ethnicity made it challenging to tease out any independent effects of each of these risk factors. **Discussion:** This review has highlighted the significant gaps in our understanding of the interactions between parents and children in population groups who experience higher risk of obesity. More effort directed towards understanding the underlying reasons for greater weight gain in low SES and Indigenous groups is needed.

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## **Susan Tawia: Iron and exclusive breastfeeding to 6 months.**

*Australian Breastfeeding Association.*

Iron is an essential micronutrient which is vital for the normal development of cognitive, motor, socio-emotional and neurophysiological functioning in infants, both during infancy and as they grow. Iron is crucial for the normal development of the brain. Iron supplementation of infants appears to: cause only a brief and modest improvement in infant iron status [1], have only a small effect on psychomotor development [2], and little or no effect on cognitive development [2] or growth [3,4]. This lack of convincing evidence for iron supplementation in young infants has led researchers to advocate for the prevention of iron deficiency rather than the implementation of programs to supplement children with iron, after the fact<sup>4</sup>. In addition, because infants under 6 months cannot regulate their iron intake, iron supplementation may, in fact, be detrimental [3]. Consequently, it is

vital for an infant's iron stores and haemoglobin concentrations to be preserved and protected. So, does a healthy, full-term exclusively breastfed infant, which received its full endowment of iron at birth, gain enough highly bioavailable iron from breastmilk to maintain a normal iron status for 6 months? And if it does, how can its iron status be maintained for 6 months? The scientific research literature was reviewed and the evidence will be presented. The evidence showed that, in the case of the exclusively-breastfed infant, breastmilk supplies just the right amount of iron until 6 months [5], when good-quality, iron-rich foods can safely be introduced into an infant's diet. The evidence also revealed that the exquisite balance that maintains an infant's iron status depends upon strict adherence to a breastmilk-only diet for 6 months and then the timely introduction of appropriate and good-quality complementary foods. A healthy, full-term infant, exclusively breastfed for 6 months, will have sufficient iron for at least 6 months [5], and such an infant does not need to be supplemented with iron and, in fact, iron supplementation may be detrimental [3].

The best strategy to ensure good iron status in healthy, full-term, exclusively-breastfed infants is to prevent iron deficiency. So, what is the best way to prevent iron deficiency in such infants?

Evidence will be presented which clearly shows that, to prevent iron deficiency in infants, the strategy should be to exclusively breastfeed infants to 6 months and then introduce good-quality complementary foods that are iron rich. Such a strategy would: prevent gastrointestinal bleeding in infants, prevent the inhibition of the absorption of iron and prevent the displacement of breastmilk with iron-poor substitutes.

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## **Robyn Thompson: Reducing painful nipple trauma and associated breastfeeding complications.**

*Robyn Thompson, Professors Sue Kildea, Lesley Barclay & Sue Kruske.*

Background: Breastfeeding complications impact on establishing and sustaining breastfeeding. Data collected during an In-Home Breastfeeding programme developed to provide assistance for women with complications (2003-2007), were analysed to inform this work. Research Questions: This paper addresses only one of the questions in the overall study. What were the main characteristics and experiences of the women presenting for assistance through the programme? What are the implications of the findings for women, midwifery and breastfeeding practice? Methods: A complex range of experiences were captured in a database set up and managed by the researcher including photos of trauma resulting from early breastfeeding. Results: High rates of nipple trauma were reported. These were confirmed by the statistical analysis of 653 detailed records of women participating in the programme. Many of these outcomes were related to delay and interruption to the first and early breastfeeds and the multiple breastfeeding techniques taught by midwives. This paper uses photos and descriptions to show nipple trauma that appeared to result from midwifery practices that taught the cross-cradle hold, malalignment of the nipple and facio-mandibular asymmetry. Conclusion: Midwives need to resist the current teaching methods that potentially result in nipple trauma and improve the promotion of instinctive, neuro-sensory mammalian behaviours to initiate and establish breastfeeding.

## **Gill Thomson: Unintended consequences of incentive provision for behaviour change around childbirth.**

*Dr Gill Thomson, Dr Nicola Crossland, Dr Heather Morgan & Professor Pat Hoddinott. School of Health, University of Central Lancashire.*

**Background and Aims:** Financial (positive or negative) and non-financial tangible incentives or rewards, such as free or reduced cost items or services that have a monetary or an exchange value, have been widely used to influence public health behaviours. Whilst the unintended consequences of incentive provision are alluded to in the literature, to date there has been little detailed exposition of what these consequences may be. We aimed to investigate the positive and negative unintended consequences of incentive provision for smoking cessation in pregnancy and breastfeeding. **Design:** A mixed methods study to inform trial design. Benefits of incentives for breastfeeding and smoking cessation in pregnancy (BIBS): <http://www.nets.nihr.ac.uk/projects/hta/103102>. Setting: North-West England and Scotland. **Participants:** A diverse sample with and without direct experience of incentive interventions. Qualitative semi-structured interviews and/or focus groups were held with 88 pregnant women/recent mothers/partners; 53 service providers; 24 experts/decision makers and interactive discussions with 63 conference attendees. Maternity and early years health professionals (n=497) participated in a web-based survey with open questions on positive and negative consequences. Two service user mother and baby groups from disadvantaged areas were involved as study co-applicants. **Results:** Positive and negative consequences were identified which highlight political, cultural, social and psychological implications of incentive delivery at population and individual levels. Four key themes are reported which relate to how incentives can 'address or create inequalities'; 'enhance or diminish individual autonomy, responsibility and motivation'; how they have a positive or negative on 'relationships with others' within their personal networks/health providers and 'impact on health/health services resources' in that whilst incentives may raise awareness and direct service delivery, this may be at detriment to other areas of health care. **Conclusion:** The utility and acceptability of incentive provision is a controversial area which generated emotive and oppositional responses. Evaluation of incentive interventions to maximise the potential for positive unintended consequences and mitigate negative unintended consequences needs to be integral to the planning, design and delivery of incentive programmes.

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## **Charlene Thornton: Neonatal morbidity related to feeding difficulties: Are there differences between births in the public compared to the private setting?**

*Dr Charlene Thornton & Professor Hannah Dahlen. School of Nursing and Midwifery, University of Western Sydney.*

**Background:** In Australia, the national statistics reveal that 32.8% (n =70,332) of women giving birth in 2011 elected private status, with 29.9% of women giving birth in private hospitals directly under private obstetric care. The remaining 3% of privately insured women received a combination of midwifery and medical care in public hospitals. The remaining (n=139, 486) 65% of women receive care as public patients in public hospitals in Australia. Women who are privately insured have been reported to have better maternal and perinatal outcomes compared to women who give birth in public hospitals as public patients; but it has been argued that these women tend to be less socioeconomically disadvantaged and healthier and therefore might be expected to have better outcomes. Arguments about the impact of private status on health outcomes are in reality complex. What is not disputed are the much higher rates of obstetric intervention that occur in private hospitals in Australia. At a national level, the intervention rates in childbirth, such as caesarean section, are significantly higher in the private sector (43.1% vs 28.4%) and the rates of normal vaginal birth significantly lower (42.7% vs 61%). Despite the rising intervention rates over the past decade, the perinatal mortality rate overall has not shown a corresponding decline. There is also growing concern that the short and long term morbidity associated with major obstetric interventions, such

as caesarean, may not be insignificant for the mother and the baby. The cost to the tax payer of the rising intervention in childbirth is also significant. One issue of concern is how intervention in childbirth is related to breastfeeding initiation and feeding difficulties at birth and beyond. **Objectives:** To examine the rates of babies recorded as having feeding difficulties within the first 28 days amongst low risk women giving birth in private and public hospitals in NSW (2000-2008) using linked population data. **Design:** Linked data population based cohort study involving five data sets. **Setting:** New South Wales, Australia. **Participants:** 691,738 women giving birth to a singleton baby during the period 2000 to 2008. **Main outcome measures:** Rates of feeding difficulties as recorded following birth and readmission to hospital in the first 28 days of life in public and private obstetric units. **Results:** Among low risk women rates of obstetric intervention were significantly higher in private hospitals. Rates of perinatal mortality were not statistically different between the two groups. Neonates born in private hospitals were more likely to have a coding attached to the birth admission and to be readmitted to hospital in the first 28 days for feeding difficulties (9.6% v 4.3%,  $p < 0.0001$ ). **Conclusion:** There are significant differences in the incidence of coded feeding difficulties in the private setting when compared to the public. The reasons for this are multifactorial and could be related to birth type and obstetric management variations evident between the two sectors.

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## **Jenni Vaarno: Infant and young child feeding practices in Solomon Islands in relation with socio-ecological model, a qualitative study.**

*Turku Institute of Child and Youth Research, University of Turku, Finland.*

Solomon Islands is one of the least developed countries, yet it was recently ranked top fourth country, where majority of children under age of two years are fed according to recommended standards (Save the Children 2012). The prevalence of children who are ever breastfed is 92.6%, mean duration of exclusive breastfeeding is 5.1 months and any breastfeeding 21.7 months (DHS Solomon Islands 2009). IYCF practices are best among wealthy and educated women residing in Honiara region, but breastfeeding prevalence is lower than in rural areas. There is also a concern breastfeeding practices are changing for worse with other changes in lifestyles (Solomon Islands Government 2008). This study aimed to explore infant and young child feeding practices in relation to socio ecological framework (McLeroy 1988) to investigate individual, interpersonal, settings in which the individual operates, and the legal, political, economic or organizational elements of the society that influence child feeding behavior in Honiara, Solomon Islands. This was a qualitative study based on semi-structured interviews about child feeding and nutrition with a 45 mothers or primary caretakers of children aged 12 to 23 months. Data was collected also about child health cards, household socio-economics and food security. Individual-level factors influencing breastfeeding initiation and continuation were strong belief of breastfeeding being natural way of feeding infants and children until they are big enough to eat normal food, mother's health and parity. Complementary feeding (CF) was considered as a path to normal food more than an important source of nutrients for growth and health. At interpersonal level, women relatives, especially grandmothers, were important sources of advice and support for breastfeeding. Infant cues of hunger and desire to eat or advice from health care personnel were main reasons for starting complementary foods. Communities and hospital supported breastfeeding, but working and continuing breastfeeding was considered impossible for most women. Children were entitlement to visit for free at the child health clinics, where also nutrition information was provided. There was very limited access to formula or commercially manufactured children's foods and only wealthy women were able to buy these for their children. Same applied for protein sources; meat and fish.

The feeding practices could be improved by giving information for the mothers about appropriate complementary feeding and declining constraints of continuing to breastfeed while employed. Special attention should be given to the families with low socioeconomic status to ensure their access to quality complementary food.

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### **Jeanine Young: Supporting culturally valued infant care practices in high risk infant sleep environments: trial of a safe sleep enabler.**

*Professor Jeanine Young, Leanne Craigie, Karen Watson, Dr Lauren Kearney, Stephanie Cowan & Associate Professor Margaret Barnes. School of Nursing and Midwifery, University of the Sunshine Coast.*

**Background:** Aboriginal and Torres Strait Islander babies are 3.8 times more likely to die suddenly and unexpectedly than non-Indigenous infants. Sleeping with a baby is a common infant care practice particularly for breastfeeding infants, and the cultural norm in Indigenous communities. However infant deaths are associated with co-sleeping in hazardous circumstances; particularly for preterm or low birth weight babies or where smoking, alcohol, drug use or unsafe sleep environments are present (1). The use of portable sleep spaces to reduce the risk of Sudden Unexpected Death in Infancy (SUDI) for families with identified risk factors has not been previously reported in Australia. Indigenous communities have identified this area as a priority for investigation (2) following successful trials of a safe sleep enabler in some Maori communities in Christchurch, New Zealand (3). **Aim:** The purpose of this study was to determine the acceptability and feasibility of the P&#275;pi-pod Program, a portable infant sleep space embedded within safe sleep health promotion, within Aboriginal and Torres Strait Islander families from six Queensland communities. **Methods:** An exploratory descriptive design was used to report parent experiences (target n=100) of using the P&#275;pi-pod Program to support safe infant sleep. Families were selected through six health services which provide antenatal and maternity care services to Aboriginal and Torres Strait Islander families, and include metropolitan, rural and remote areas of Queensland. Eligible participants were parent/s and/or carers of a baby (ideally <1 month of age) with the presence of one or more known SUDI risk factors (1). The P&#275;pi-pod Program (3) comprises three interlinked components: 1) Safe Space: a polypropylene box transformed into an infant bed through addition of a fabric cover, mattress and bedding; 2) Safe Care: parent education includes safety briefing and safe sleeping information; 3) Role of family: families committed to spread what they had learned about protecting babies as they sleep. Parent questionnaires were administered face-to-face or by telephone within 2 weeks of receiving the P&#275;pi-pod; then monthly thereafter until pod use ceased. **Results:** A total of 31 families meeting eligibility criteria were recruited by February 2014, with a minimum of 50 families anticipated by November 2014. The acceptability of the P&#275;pi-pod as a safe sleep space for babies was supported by parent responses that related to three key themes: safety, convenience and portability. Awareness of safe sleeping messages has been raised through social networks. Nil adverse outcomes have been reported. In several organisations, the Pepi-pod Program has been integrated into current service provision. **Conclusion:** The P&#275;pi-pod program was accepted and used appropriately by parents living in Queensland Indigenous communities. To further reduce SUDI, innovative strategies which allow for co-sleeping benefits, respect cultural norms and infant care practices, whilst enabling safe sleep environments are necessary. **Implications for policy, practice and education:** Evaluating innovative and culturally respectful strategies to reduce SUDI risk will better inform the evidence-base used by educators, clinicians, researchers and policy makers in supporting parents to use safe infant sleeping strategies. References: 1. Commission for Children and Young People and Child Guardian Queensland. (2012). Annual Report: Deaths of children and young people Queensland 2011-2012. Brisbane: Queensland Government. 2. Dodd, J. (2012). Evaluation of the Department of Health Western Australian Operational Directive Satewide Co-sleeping / Bed-sharing Policy for WA Health Hospitals and Health Services. Collaboration for Applied Research and Evaluation. Telethon Institute for Child Health

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## Posters

### **Amy Brown: Introduction of complementary foods and later weight and eating behaviour: The role of a baby-led weaning approach.**

*Dr. Amy Brown, Department of Public Health and Policy Studies, Swansea University, UK. And Dr. Bronia Arnott, Department of Psychology, Newcastle University, UK. Sa2 8PP.*

Nutrition during infancy may have a long-term impact upon weight gain and eating style. Breastfeeding and a later introduction of solid foods have both been shown to be protective against obesity. How infants are introduced to solid foods may also be important. Traditionally, infants are introduced to solid foods via spoon-feeding of purees. However, an alternate approach known as baby-led weaning advocates allowing infants to self-feed foods in their whole form. Given recommendations to introduce solid foods at six months, infants are developmentally able to self-feed at this stage and advocates of baby-led weaning suggest that pureed food is unnecessary. Proponents of the baby-led weaning method suggest this may promote healthy eating styles, but evidence surrounding the method and its impact is sparse. The aim of the current study was to thus to compare child eating behaviour at 18–24 months between infants weaned using a traditional weaning approach and those weaned using a baby-led weaning style. To explore this, two hundred ninety-eight mothers with an infant aged 18–24 months completed a longitudinal, self-report questionnaire. In Phase One, mothers with an infant aged 6–12 months reported breastfeeding duration, timing of solid foods, weaning style (baby-led or standard) and maternal control, measured using the Child Feeding Questionnaire. At 18–24 months, post-partum mothers completed a follow-up questionnaire examining child eating style (satiety-responsiveness, food-responsiveness, fussiness, enjoyment of food) and reported child weight. The findings showed that Infants weaned using a baby-led approach were significantly more satiety-responsive and less likely to be overweight compared with those weaned using a standard approach. This was independent of breastfeeding duration, timing of introduction to complementary foods, infant birth weight, maternal demographic background and maternal control. Baby-led infants were also less likely to be rated as fussy eaters but lower levels of maternal control explained this. A baby-led weaning approach may therefore encourage greater satiety-responsiveness, lower fussy eating and healthy weight-gain trajectories in infants. Potentially, allowing the infant to self-feed enables the infant to be in greater control of their intake and may also lead to longer meal durations, both of which may promote positive appetite control. Additional explanations might include post ingestive learning, a wider variety of flavours and participation in family meal times, which encourage a healthier relationship with food. However, the limitations of a self-report, correlational study with self-selecting participants are noted. Data also needs to explore whether these differences remain into later childhood. Further research using a more rigorous design is needed given the increasing numbers of parents choosing to follow this approach in the UK.

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### **Dawn Eccleston: 1001 Critical Days: The Importance of Nurture to Promote Healthy Development; A Tiered Approach to Parent-Infant Services.**

*School of Health, University of central Lancashire.*

**Aim:** The aim of this paper is to identify the need for practitioners to recognise that safe, secure nurture of the infant, from conception to age 2, is critical for the best start in life and to discuss what services should be available at what point to promote best practice. **Background:** Many papers have been published to demonstrate the importance of secure attachments for infants and children. It is

now widely accepted that early experiences shape a baby's brain development and have a life-long impact on mental and emotional health. By the age of 2 the brain has reached 80% of its adult weight. It is imperative that factors that promote optimum brain development are recognised. **Method:** A literature search was undertaken using MEDLINE and CINAHL databases. Terms used were attachment, brain development, nurture, 1001 days, cortisol and stress. The library was also accessed. **Results/Findings:** Cortisol is a hormone released in reaction to stress. It is associated with impaired cognitive function, lowered immunity and various physical health problems. It, therefore, follows that it is in the infants best interests to reduce/eliminate factors which cause stress, in order to reduce or inhibit cortisol production and promote optimum brain development. Antenatally it is important that cortisol levels in pregnant women are minimised in order for healthy development of the foetus. Post-natally skin-to skin contact, as promoted by UNICEF from birth, will promote attachment and ensure the infant gains a feeling of safety and love. Interaction with the infant and keeping them close promotes optimum development, physically, cognitively and emotionally. Social and environmental factors can have a huge impact on the ability of parents to provide a loving, nurturing environment. Factors such as maternal depression, drug/alcohol abuse, domestic violence and psychiatric illness can increase cortisol levels and make bonding with the baby extremely difficult. Babies born to mothers with increased cortisol levels are less likely to breast feed. Stress inducing circumstances should be identified and plans put in place to minimise these. The ability to provide a nurturing relationship with the infant should be paramount, along with parenting skills and emotional well-being. Four tiers of service, identifying need, can point practitioners to interventions necessary when problems occur. Early and appropriate services can then be put in place to prevent future problems and promote optimum healthy development. **Conclusions:** The importance of nurture from conception to age 2 cannot be underestimated (Leadsdom, Field, Burstow&Lucas) . Research is highlighting the need for secure attachments and loving relationships in this first 2 years in order to minimise mental and emotional problems later in life (Post, Hohmann& Epstein). Policy makers should acknowledge these factors when looking at the future of health care and the need for health education, both antenatally and in the early years. Practitioners should be able to recognise the signs of stress, both in mothers and babies (<http://www.unicef.org.uk/babyfriendly>) and know how to advise and minimise stress in order to promote healthy, happy, well attached children who will grow up to be secure contributors to society.

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## **Alison Elms: Skin-to-Skin: Ongoing support for mothers of babies born by Elective Lower Segment Caesarean Section (ELSCS) so babies are no longer separated from their mothers at birth.**

*Maternity Services, Central Coast Local Health District, NSW.*

**Background:** Women undergoing Elective Lower Segment Caesarean Section (ELSCS) births at Gosford Hospital were routinely separated from their well baby at birth minimalising and interrupting skin-to-skin (STS) contact. Mothers reported feeling distressed about an unwarranted separation of mother and baby. This feedback, coupled with best practice underlined our responsibilities relating to National Safety and Quality Health Service Standards (2.9): consumers should participate in the development of action plans. The World Health Organisation (WHO) also recommends that all births be given the opportunity for uninterrupted mother/baby contact until the first breastfeed. **Methods:** The process of post ELSCS STS evolved over 4 years. Dialogue and collaborative interaction with team members, the Operating Theatre/Recovery staff and listening to parents' stories assisted this process. A review of staffing levels by the Birthrate Plus process gave the postnatal ward an extra staff member. An allocated midwife attends the birth and follows the mother to recovery with the baby for STS and breastfeeding at all ELSCS enabling uninterrupted STS.

**Results:** All ELSCS well babies and mothers are no longer separated and have STS and initial breastfeed within WHO standards. Parents report a happier ELSCS birth experience. Staff report more satisfaction and feel supported in their working environment. **Conclusion:** After consideration, person centred care has increased the value of the birth experience for the ELSCS woman. The workload of the ELSCS process has been shared amongst the team of postnatal midwives.

## **Anahita Esbati: Uptake and implementation of the Baby Friendly Hospital Initiative (BFHI). A review of the literature.**

*Anahita Esbati, Associate Professor Margaret Barnes, Jane Taylor & Amanda Henderson. School of Nursing and Midwifery, University of the Sunshine Coast.*

**Background:** Breastfeeding is an important public health issue with extensive evidence supporting the health and economic benefits of breastfeeding [1-8]. The Baby Friendly Hospital Initiative (BFHI) is an initiative of the World Health Organisation (WHO) and United Nations International Children's Emergency Fund (UNICEF) to improve breastfeeding practices to promote, support and maintain breastfeeding [9]. The BFHI has two parts: 1) the Ten Steps to Successful Breastfeeding, which highlight practices that support the initiation and maintenance of breastfeeding; and 2) the WHO Code for the Marketing of Breast milk substitutes, which sets the standard expected of health facilities in relation to the promotion of breast milk substitutes [10 & 11]. **Method:** A review of studies was undertaken in 2013 using a systematic process. The databases used were CINAHL, GOOGLE SCHOLAR, MIDIRS, PROQUEST, PUBMED, SCOPUS, WILEY, and Joanna Briggs Institute EBP Database. Key search terms included BFHI, Baby Friendly Hospital, implementation of BFHI, uptake of BFHI, BFHI and policies, and health professionals' perception of BFHI. Studies that focused on the implementation and uptake of the BFHI were included. **Results:** The majority of studies examined were related to the implementation of the Ten Steps rather than the uptake and implementation of the BFHI in its entirety. Cultural factors emerged from nine studies and two literature reviews [12-21]. Cultural factors can be placed in two main cultural sets, organizational, and individual. The majority of studies examining outcomes found an association between cultural themes at both organisational and individual levels on the uptake and implementation of the BFHI. Support theme emerged from seven studies and three literature reviews [46-54, 22-30, 18]. These studies and the literature review, which identified the impact of support on the uptake and implementation of the BFHI, mainly focus on providing resources and funds, and intra-organisational support such as training programs for health care staff. These studies suggested the impact of support within organisations, society, and families, on the uptake and implementation of the BFHI, and implementation of the Ten Steps. The provision of education for staff, mothers, and their families emerged as a key factor in 12 studies and one literature review [31-40, 18]. It was suggested that education is an influential factor in the uptake and implementation of the BFHI in addition to the implementation of the Ten Steps. This influence depends on the purpose and type of education and the audiences receiving it.

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## **Caroline Elizabeth Flynn: Infant Feeding in Emergencies: Public Health Promotion App for Smart Phones, Tablets & Computers.**

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**Aim:** To development of a single economical, Smart Phone / Tablet / Computer Application that is readily accessible, evidenced based and user friendly with the aim of Promoting, Protecting and Supporting Breastfeeding and optimal Maternal and Infant / Child Health outcomes. To promote breastfeeding or breastmilk and reinforce it value as the safest and most nutritionally appropriate way to feed infants / children from birth 2 years and beyond. To assist families of infants to acknowledge and develop contingency checklists and plans for the unexpected absence of clean water, electricity, gas, waste disposal, residential communication systems and safe structures, which may all be affected during and after events such as family or environmental emergencies. To inform on how to prevent respiratory and GIT diseases that can cause severe Maternal or Infant / Child, ill health and loss of life. To promote and preserve wellness for both Mother & Infant / Child and the family unit, in terms of supporting Mental, Physical & Social Health and Wellbeing. To build parenting resources, capacity, resilience and self efficacy for vulnerable families, within a supported and informed community of carers and helpers, working together to achieve stability and safety. To advocate for families to stay together throughout emergencies, where possible, to safeguard the family unit from further dangers and to support each other physically and emotionally in order to apply or develop protective behaviours and help the to adapt to new environments and life

circumstances. To ensure privacy for the Mother and Infant / Child so as skin to skin contact and frequent breastfeeding is possible and accessible. To enable appropriately trained people to ethically procure supplies, monitor distribution and appropriately direct and safeguard, donor breast milk, infant formula, clean (safe) water and nutritionally support and resources for the lactating mother. Where an infant has been recently weaned, mothers are informed about how they can express and re-lactate to supplement or replace the need for artificial infant milks (Infant Formula) while they build their breastmilk resources. In partnership with Mothers, Families or Carers, explore & if necessary exhaust all breastfeeding / breast milk options. Infants requiring alternative nutritional feeding with a commercial infant formula will be appropriately supported by their family and skilled and knowledgeable ABA Counsellors or Health Professionals to achieve safe infant feeding outcomes using clean and appropriate equipment and supplies.

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## **Haoyue Gao: Birth outcomes and infant feeding practices in urban and rural areas of the Deyang region, Sichuan Province, China.**

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**Aim:** To assess the current situation of infant feeding practices in urban and rural areas of the Deyang region as the basis for the development of adequate nutrition and health education messages. **Background:** At national level, about 28% of Chinese infants were exclusively breastfed up to 6 months [1]. A cohort study in northwest China showed that, because of the high rate of prelacteal feeding, the prevalence of exclusive breastfeeding at 14 days and 6 months was 24.20% and 2.6% respectively [2]. **Methods:** Cross-sectional sampling was used in two urban hospitals and five rural clinics (randomly selected) in the Deyang region of Southwestern China. In 2012, 204 mothers with newborns were recruited in postnatal wards on the basis of informed consent. Interviews were conducted on background information and breastfeeding behavior within one week after delivery. In 2013, one year after the original interviews, 43% (n=88) of the mothers were able to be traced and followed up with telephone interviews. **Results:** Urban postpartum mothers had higher incomes (p=0.026), they were better educated (p=0.000), tended to give birth at older ages (26.92 urban vs. 24.97 rural, p= 0.001), were 2 centimeters taller (1.59m urban vs. 1.57m rural, p= 0.006) and had a higher gestational weight gain (about 2 kg more: 16.67kg urban vs.14.64kg rural, p= 0.007) by comparison to rural mothers. The prevalence of Cesarean section was high in both urban and rural areas (63.9% urban vs. 68.4% rural, p=0.764). Urban newborns were heavier (3.32kg urban vs. 3.21kg rural, p=0.053) and significantly taller than rural babies (49.79cm urban vs. 49.17cm rural, p=0.005). The proportion of low birth weight (<2.5kg) was 3% and high birth weight (>4kg) was 3.5% with no significant difference between urban and rural areas. After birth, nearly all mothers (98.0% urban vs. 99.0% rural) started with any amount of breastfeeding. Offering prelacteal feeding (84.5%) and supplementary food (47.9%) with infant formula were widespread in both areas. One week after delivery, the prevalence of exclusive breastfeeding was 8.0% (9.8% urban vs. 6.2% rural), mixed feeding was 90.5% (88.2% urban vs. 92.8% rural), and exclusive bottle-feeding was 1.5% (2.0% urban vs. 1.0% rural). One year later, the average duration of any amount of

breastfeeding was 7.06 and 7.35 months in urban and rural areas respectively ( $p=0.732$ ). Only 2 of the 88 mothers practiced exclusive breastfeeding up to 6 months of age. **Conclusion:** Although disparities in infant feeding between urban and rural areas exist, the situation is inadequate in both settings. Therefore, improved nutrition and health education for women of reproductive age is very important to decrease the high prevalence of infant formula feeding with breastfed babies. Implications for Policy: To achieve a higher prevalence of exclusive breastfeeding, the implementation of the International Code of Marketing of Breast-milk Substitutes, the management of Baby Friendly Hospitals [3] and maternity leave [2,3] need to be strengthened by the Chinese government.

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### **Felix Oglo: The study aimed to examine determinants of changes to key sub-optimal breastfeeding outcomes in Nigeria for the period 1999-2013.**

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**Background:** In 1992, Nigeria introduced significant intervention strategy (baby friendly hospital initiative) to promote and support breastfeeding among mothers that resulted in some improvement in breastfeeding outcomes. Recently, however, there has been a drop in some key sub-optimal breastfeeding practices. **Objectives:** The study aimed to examine determinants of changes to key sub-optimal breastfeeding outcomes in Nigeria for the period 1999-2013. **Methods:** Data on 88,152 children under-24 months were obtained from the Nigerian Demographic and Health Surveys (NDHS) spanning the period 1999-2013. Trends in socio-economic, health service and individual characteristics associated with key breastfeeding outcomes were examined using multi-level regression analyses. **Results:** The study found significant increasing prevalence of non-exclusive breastfeeding (44% in 1999 to 60% in 2013), predominant breastfeeding (19% in 1999 to 25% in 2013), delayed initiation of breastfeeding (28% in 1999 to 40% in 2013) and bottle feeding (43% in 1999 to 54% in 2013) among educated mothers compared to mothers without schooling. A similar increasing trend was evident for mothers from wealthier households and mothers who had a higher frequency of health service access. Similarly, the risk for delayed initiation of breastfeeding and bottle feeding was higher among educated mothers and mothers from wealthier households. **Conclusion:** Significant increasing trends in key sub-optimal breastfeeding practices were evident among mothers of higher socio-economic status and mothers who had more health service access in Nigeria. Broader national policies that underpin nursing mothers in work environments and the use of trained health care professionals including a comprehensive community-based approach are proposed to improve breastfeeding patterns in Nigeria.

### **Elizabeth Quinn: 'An investigation of breastfeeding support groups in Ireland from a Cultural Historical Activity Theory perspective'**

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**Aim:** To research the role of Breastfeeding Support Groups in Ireland in providing information, support and encouragement to mothers in Ireland to breastfeed. To investigate mothers' and health professionals' knowledge, attitudes and experiences of breastfeeding support (face-to-face and online); identify strengths/limitations; identify barriers; explore issues of breastfeeding supporters' education/accreditation. **Background:** Irish breastfeeding initiation rates remain the lowest of all OECD countries by a considerable margin (Food Safety Authority of Ireland 2012): 55.4% babies received 'any' breastmilk at hospital discharge (Economic and Social Research Institute 2013) with most fully formula-fed by three months (Williams *et al.* 2009). One survey found 55% mothers initiated with over half fully formula fed at one month and 9% 'any' breastfeeding at six months

(Begley *et al.* 2008). Peer support is effective in promoting breastfeeding initiation and duration (Britton *et al.* 2007, Dyson *et al.* 2008, Renfrew 2012, Kempenaar & Darwent 2013) and important for breastfeeding continuance (Kaunonen *et al.* 2012). In Ireland, there are two main face-to-face groups, La Leche League and Cuidiú with breastfeeding counsellors trained and accredited. Online support groups have now emerged with interested mothers supporting each other. Public Health Nurse clinics are the most accessed, however, 44% of breastfeeding mothers don't access any support services (Begley *et al.* 2008). Women's views on peer support are not well reported and further research is recommended to identify the aspects of breastfeeding support that are most effective (Britton *et al.* 2007, Renfrew 2012). **Methods:** Mixed-methods with a Participatory Research approach 1. Research Advisory Groups: a) breastfeeding mothers b) breastfeeding supporters c) health professionals to assist in devising questions for the online survey and piloting. 2. Online Survey: to assess knowledge, attitudes and experiences of mothers who accessed or did not access breastfeeding support groups. Recruitment through online breastfeeding support sites; breastfeeding support groups; parenting websites and through Public Health Nurse (PHN) Clinics and post-natal units. 3. Online survey results presented to Research Advisory Groups for discussion/identify issues for further exploration. 4 Individual interviews with mothers from online survey. Cultural Historical Activity Theory (CHAT) will be used as the theoretical framework for analysis and design (Engeström 1987). Activity Theory focuses on 'practice' rather than on individuals (Bødker 1989, p. 179) and can assist in highlighting contradictions in activity systems seen as 'opportunities for change or learning' (Turner & Turner 2001, p. 1). The mother/baby dyad may be one activity system with others such as partners, family members, breastfeeding supporters and health professionals having different objectives leading to contradiction. The mother/baby dyad needs support to succeed: attitudes of society members to breastfeeding strongly impact on mother's decisions and practice. **Conclusion:** Comprehensive research has been carried out on breastfeeding initiation and duration but little research has been carried out specifically on breastfeeding peer support in Ireland. With breastfeeding rates effectively increasing by only 3% since 2005 (Layte 2012), wider availability and visibility of peer support groups and breastfeeding mothers may assist communities to promote and support mothers to breastfeed.

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### **Charlene Thornton: Is there an association between the model of antenatal care and breastfeeding initiation?**

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**Background:** Exclusive breastfeeding is a global health directive of the World Health Organisation although it is well known that the decision to initiate breastfeeding is influenced by a variety of factors including maternal health, socio economic status and antenatal education. In the Australian

setting there are a wide variety of antenatal care provision models only some of which provide continuous care by the one or a small team of providers. This care can be provided by obstetricians, midwives and general practitioners in either the hospital or community setting or a combination of settings. Whilst choice is beneficial to consumers, the quality of information provided to women in this variety of settings is difficult to monitor and assess and there is currently no evidence available concerning breastfeeding initiation and the type of antenatal care a woman receives. **Objectives:** To examine the rates of breastfeeding initiation in women in NSW (2009-2013) based upon recorded model of antenatal care using population data. **Design:** Perinatal Data Collection cohort. **Setting:** New South Wales, Australia. **Participants:** 380,000 women giving birth to a singleton baby during the period 2009 to 2013. **Main outcome measures:** Rates of breastfeeding initiation as recorded following birth on the Perinatal Data Collection stratified by model of antenatal care. **Results:** This study is currently being conducted and results will be available June 2014. **Conclusion:** Differences in rates between models is anticipated. This study will provide one of the largest cohort of Australian women examined to date in regard to breastfeeding initiation and will add to the body of evidence examining models of antenatal care.

### **Jenni Vaarno: Maternal restrictive eating influences complementary feeding practices.**

*Jenni Vaarno., Anne Kaljonen & Hanna Lagström. Turku Institute of Child and Youth Research, University of Turku, Finland.*

Parents have a pivotal role to infant and young child diet. Parental eating patterns and practices may have an effect on the feeding practices of infants, especially breastfeeding (Brown 2014), but no studies are available on links between parental eating behavior and complementary feeding practices. The purpose of the study was to examine the association between maternal and paternal eating behavior and complementary feeding initiation and style. This follow-up study involves a cohort sample (n= 1153) of STEPS –study recruited to the study in Southwest Finland (2007-2009). Both parents completed at 4 months the Three factor eating questionnaire (Karlsson et al. 2000) and at 13 months Food neophobia scale (Pliner & Hobden 1992) and Index of diet quality (Leppälä et al. 2010). Parents recorded to a structured diary data on infant's age when first solid food or specific foods (vegetables, fruits and tubers, grains, meat, fish and milk and milk products), were introduced to infants diet. First solid food, most often potato, was introduced to children's diet on average at the age of 3.9 months (SD 0.99). Mothers with high cognitive restraint (CR) introduced first solid foods (p=0.006) as well as of vegetables, fruits and tubers (p=0.001), grain products and meat (p=0.011) and fish and shellfish (p=0.004) earlier than mothers with low CR. After adjusting for confounding factors, high maternal CR was found to be associated earlier introduction of solid foods ( $\beta=-0.021$ , p=0.012) and earlier introduction of vegetables, fruits and tubers ( $\beta=-0.004$ , p=0.009) to child's diet. Children of mothers and fathers having good dietary quality were introduced solid foods later (p= 0.027 and p=0.014, respectively) than of parents having poor dietary quality. After controlling for confounding variables, parental dietary quality had no significant association with introduction of solid foods. Mother's cognitive restraint and maternal and paternal dietary quality were associated with complementary feeding practices in unadjusted analysis, but after controlling for confounding factors only maternal cognitive restraint remained significant. These findings are important especially for those working to support optimal complementary feeding practices. Although no association between parental dietary quality and complementary feeding could be found in the final analysis, focusing health promotion interventions aiming to improve parents' eating patterns could lead to more favorable complementary feeding practices for infants and young children.

## **Shi-an Yin: The studies on Human milk profiling and the establishment of database of human milk compositions in China.**

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**Objective:** In order to establish the Chinese human milk composition database, we are to measure the dietary intakes of the lactating women, the nutrient composition of the breast milk and the growth of the infants. **Method:** A cross-sectional survey was conducted to collect breast milk sample, evaluate the nutritional and health status of lactating women and their infants from 12 provinces in China. **Results:** Up to date, total of 6000 breast milk samples including colostrums, transitional milk and mature milk were collected. The mean maternal age ranged from 24.2 to 27.6 years; the percentage of completing 9 years or more education varied from 27.2% to 98.2%. Majority of these lactating women were self-reported health before pregnancy. The median age of infants was around 0.46 mo. About 51%-55.7% of infants were boys. The preterm delivery rate was 2.6%-6.8%. The analysis and methodology on essential and non-essential composition are under-developing. **Conclusion:** The nutritional and health status of lactating women are improved which should impact the nutrient concentrations in the human milk and infant's growth.

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## **Jeannie Young: Keeping babies close and safe: a risk minimisation policy approach to practically support breastfeeding while promoting safe infant sleeping.**

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**Background:** The message Breastfeed baby has been reinstated into the Australian Sleep Safe, My Baby public health campaign in 2012 following a review of the evidence which demonstrated breastfeeding is an independent protective factor in reducing SUDI risk. Bed-sharing and co-sleeping with a baby supports increased frequency and duration of breastfeeding, however has become controversial as co-sleeping has been associated with infant deaths occurring in hazardous circumstances. This has led to some countries issuing blanket statements for all parents never to bed-share under any circumstances and inconsistency in the advice provided by health professionals relating to this practice, despite the acknowledgement that many parents may choose to; don't intend to, but do; or have no option but to, share sleep with their baby. There is also concern that many parents will not disclose their parenting strategies if they believe it to be an unsupported practice, and that opportunities for health promotion to facilitate informed decision making and safe sleep action to suit individual family circumstances, will be lost. **Aim:** The presentation will share an evidence-based risk minimisation approach to shared sleeping arrangements with infants, which values and respects cultural norms, supports breastfeeding and continued close contact with a caregiver, and acknowledges the practical implications of breastfeeding babies during the night faced by parents. **Methods:** Safe infant sleeping guidelines developed in Queensland specifically chose risk minimisation (reduce risks) over a risk elimination (never) approach to co-sleeping, the principles of which have been adopted by several state health departments and SIDS and Kids. Active consultation and collaboration between key national stakeholder organisations which support parents with young infants has been integral to facilitating a consistent approach to providing parent support. Stakeholder groups include, but are not limited to, SIDS and Kids, Australian Breastfeeding Association and the Australian College of Midwives. **Results:** An evidence-based risk minimisation approach which provides the risks and benefits of co-sleeping, highlights circumstances in which shared sleep is not recommended, and provides strategies for reducing risk in all infant sleeping environments, especially for parents who choose to, or find themselves, sharing sleep as they breastfeed or settle their infant, has been adopted by key organisations. Organisational position statements and parent resource literature have been developed and this approach is progressively

making its way into guidelines for hospital service provision in some states. **Conclusion:** To further reduce SUDI, innovative policy approaches which allow for co-sleeping benefits, respect cultural norms and infant care practices, whilst enabling safe sleep environments are necessary to ensure evidence based information is delivered in a consistent way. Implications for policy, practice and education: The principles of risk minimisation have utility in the development of useful and realistic state and local hospital guidelines relating to safe infant sleeping and are necessary in order to support health professionals to appropriately role model safe sleeping and provide consistent advice to parents about practical strategies to reduce risk in all sleep environments.





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